DEVELOPMENT SERVICES DEPARTMENT
ENVIRONMENTAL COORDINATOR
450 110th Ave NE., P.O. BOX 90012
BELLEVUE, WA 98009-9012

OPTIONAL DETERMINATION OF NON-SIGNIFICANCE (DNS) NOTICE MATERIALS

The attached materials are being sent to you pursuant to the requirements for the Optional DNS Process (WAC 197-11-355). A DNS on the attached proposal is likely. This may be the only opportunity to comment on environmental impacts of the proposal. Mitigation measures from standard codes will apply. Project review may require mitigation regardless of whether an EIS is prepared. A copy of the subsequent threshold determination for this proposal may be obtained upon request.

File No. 19-125906-LO

Project Name/Address: Kassam Residence 840 97th Ave SE

Planner: David Wong

Phone Number: 425-452-4282

Minimum Comment Period: 12/19/19

Materials included in this Notice:

☒ Blue Bulletin
☒ Checklist
☒ Vicinity Map
☒ Plans
☐ Other:

OTHERS TO RECEIVE THIS DOCUMENT:
☒ State Department of Fish and Wildlife / Sterwart.Reinbold@dfw.gov; Christa.Heller@dfw.wa.gov;
☒ State Department of Ecology, Shoreline Planner N.W. Region / Jobu461@ecy.wa.gov; sepaunit@ecy.wa.gov
☒ Army Corps of Engineers Susan.M.Powell@nws02.usace.army.mil
☒ Attorney General ecyolyef@atg.wa.gov
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SEPA Checklist Reviewed By:
David Wong on 11/26/19

Development Services

SEPA Environmental Checklist

The City of Bellevue uses this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions

The checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully and to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions.

You may respond with “Not Applicable” or "Does Not Apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies and reports. Please make complete and accurate answers to these questions to the best of your ability in order to avoid delays. For assistance, see SEPA Checklist Guidance on the Washington State Department of Ecology website.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The city may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Background

1. Name of proposed project, if applicable Kassam Residence
2. Name of applicant Faizel Kassam
3. Contact person Mike Thai Phone 425-822-5242
4. Contact person address mthai@watershedco.com
5. Date this checklist was prepared 9/24/2019
6. Agency requesting the checklist Bellevue Development Services

DW

7. Proposed timing or schedule (including phasing, if applicable)

Development will start as soon as permits are issued. Mitigation plantings will be installed immediately after construction is finished.

8. Do you have any plans for future additions, expansion or further activity related to or connected with this proposal? If yes, explain.

No.

9. List any environmental information you know about that has been prepared or will be prepared, that is directly related to this proposal.

Critical Areas Report
Arborist Report
Geotechnical Report

10. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

No.

11. List any government approvals or permits that will be needed for your proposal, if known.

Bellevue - Critical Areas Land Use Permit
Bellevue - Building Permit

DW

12. Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

The proposed project would demolish the existing single-family residence and construct a new, larger residence in its place. The subject property is 16,703 square feet (SF) or slightly over 1/3 acre in size. The new residence will be a 6,368 SF 2-story dwelling (area of lot covered = 3,698 SF) with a 681 SF garage.

13. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and the section, township and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

Site address: 840 97th Ave SE, Bellevue, WA 98004; parcel number: 5491700230; Quarter-Section-Township-Range: NE-6-24-5

Environmental Elements

Earth

1. General description of the site:
   - ☑ Flat
   - ☐ Rolling
   - ☐ Hilly
   - ☑ Steep Slopes
   - ☐ Mountainous
   - ☐ Other _____
2. What is the steepest slope on the site (approximate percent slope)? 40%

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3. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

The soil type on the site was determined to be silt; see geotechnical report.
Kitsap silt loam (KpD)
Alderwood gravelly sandy loam (AgC)

4. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No.

5. Describe the purpose, type, total area and approximate quantities and total affected area of any filling, excavation and grading proposed. Indicate the source of the fill.

Clearing and grading limits will total 10,540 SF for the construction of the home and 1,900 SF for the mitigation plantings. Estimates for cut and fill are 340 cubic yards and 40 cubic yards respectively, in regards to the construction of the home.

6. Could erosion occur as a result of clearing, construction or use? If so, generally describe.

Yes, erosion could occur as a result of the demolition and construction phases of the project. Any time there are construction activities involving land disturbance, there is a possibility of erosion. BMPs will be installed surrounding the construction area including silt fencing to prevent any sediment from leaving the area.

7. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? 41%

DW

8. Proposed measures to reduce or control erosion, or other impacts to the earth, if any.

The access site for the property will be covered with quarry spalls to reduce erosion of the hill slope as heavy machinery and trucks access the site for demolition and construction. BMPs will be put into place within the construction area and surrounding it, including the installation of temporary silt fencing to prevent soil and debris from exiting the construction area.
Erosion Control regulated by BCC 23.76

Air

1. What types of emissions to the air would result from the proposal during construction, operation and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Emissions will be produced by diesel and unleaded gas machinery and vehicles conducting deliveries of materials, demolition activities, and construction activities. When the project is completed, emissions will be consistent to that of a normal single-family residence.

2. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No.

3. Proposed measures to reduce or control emissions or other impacts to air, if any.

All equipment used during construction will be kept in good working order.

DW

Water

1. Surface Water
   a. Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

No.

   b. Will the project require any work over, in or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

No.

   c. Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of the fill material.

n/a

   d. Will the proposal require surface water withdrawals or diversions? Give a general description, purpose and approximate quantities, if known.

No.

   e. Does the proposal lie within a 100-year floodplain? No.
   If so, note the location on the site plan.

DW

f. Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No.

2. Ground Water

a. Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

n/a

b. Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals…; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

n/a

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3. Water Runoff (including stormwater)
   a. Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

During construction BMPs will be in place to keep stormwater from freely flowing out of the construction area and/or property, including silt fencing surrounding the exterior of the construction zone.

   b. Could waste materials enter ground or surface waters? If so, generally describe.

No, proposed BMPs will contain all materials on site and prevent any waste materials from entering ground or surface waters.

   c. Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

Yes, the larger amount of proposed impervious surface will alter drainage on the site. A comprehensive stormwater plan has been incorporated into the building plans and will control stormwater flow associated with the new residence and driveway.

Indicate any proposed measures to reduce or control surface, ground and runoff water, and drainage pattern impacts, if any.

The stormwater system incorporated in the project plan will control all surface runoff from the new residence and driveway.

DW

Plants

1. Check the types of vegetation found on the site:

   - ☑ deciduous tree: alder, maple, aspen, other _____
   - ☑ evergreen tree: fir, cedar, pine, other _____
   - ☑ shrubs
   - ☑ grass
   - ☐ pasture
   - ☐ crop or grain
   - ☐ orchards, vineyards or other permanent crops
   - ☐ wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other _____
   - ☐ water plants: water lily eelgrass, milfoil, other _____
   - ☐ other types of vegetation _____

2. What kind and amount of vegetation will be removed or altered?

   Most of the area to be disturbed is either part of the existing residence or driveway or the landscaped lawn area. Two Douglas firs, two big leaf maples, and a western red cedar are proposed to be removed, as well as 7 arborvitae shrubs in the southeast corner of the property. Several non-native rhododendron shrubs and hazel nut trees will also be removed throughout the clearing limits.

3. List any threatened and endangered species known to be on or near the site.

   None

4. Proposed landscaping, use of native plants or other measures to preserve or enhance vegetation on the site, if any.

   A mitigation plan will be implemented that restores understory vegetation using native plants to offset steep slope setback impacts. The mitigation plantings will be positioned in the southern portion of the property. See mitigation plan.

DW

5. List all noxious weeds and invasive species known to be on or near the site.

English ivy.

Animals

1. List any birds and other animals which have been observed on or near the site or are known to be on or near the site. Examples include:

   Birds: ☐hawk, ☐heron, ☐eagle, ☑songbirds, ☐other _____

   Mammals: ☐deer, ☐bear, ☐elk, ☐beaver, ☐other _____

   Fish: ☐bass, ☐salmon, ☐trout, ☐herring, ☐shellfish, ☐other _____

2. List any threatened and endangered species known to be on or near the site.

None

3. Is the site part of a migration route? If so, explain.

No.

4. Proposed measures to preserve or enhance wildlife, if any.

The mitigation plan will enhance on-site wildlife habitat by increasing plant biodiversity and restoring currently bare soil to native plants.

DW

5. List any invasive animal species known to be on or near the site.

None known

Energy and Natural Resources

1. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Electric and natural gas will be used to meet the energy needs of a single-family residence of this size. These will be provided by the local public utility.

2. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.

3. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any.

None are proposed at this time.

DW

Environmental Health

1. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill or hazardous waste, that could occur as a result of this proposal? If so, describe.

No, all proper precautions will be taken to ensure all utilities are shut off and any appliances or other materials containing toxic or hazardous substances are taken out of the home before demolition.

   a. Describe any known or possible contamination at the site from present or past uses.

None known.

   b. Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

There are no known existing hazardous chemicals/conditions on the property.

   c. Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

During demolition and parts of construction large equipment may be used. When machinery is active on site, there is always a possibility for fluid leaks or spills. Construction BMPs will be used to minimize the likelihood of these events and their impact if they do occur.

DW

d. Describe special emergency services that might be required.

None.

e. Proposed measures to reduce or control environmental health hazards, if any.

None.

2. Noise

a. What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

Noise levels from the surrounding area are typical of a dense suburban residential setting.

b. What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

The project would produce the usual short-term construction noise associated with demolition and construction of a single-family residence. The largest noise impact will result from demolition and the excavation of the new basement and foundation; both will require large equipment (e.g., excavator). The long-term impact of the project will not change from its existing condition, as it will continue to be used as a single-family residence.

c. Proposed measures to reduce or control noise impacts, if any.

Demolition and construction noise will be limited to normal working hours during the regular work week.

Noise regulated by BCC 9.18

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Land and Shoreline Uses

1. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

   The site is currently used as a single-family residence and will continue in that use when the proposed project is finished. Therefore, this proposal will not affect land uses of nearby or adjacent properties.

2. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to non-farm or non-forest use?

   No.

   a. Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling and harvesting? If so, how?

      No.

3. Describe any structures on the site.

   Currently, there is a two-story single-family dwelling.

DW

4. Will any structures be demolished? If so, what?

Yes, the current single-family residence will be demolished.

5. What is the current zoning classification of the site? single-family residential

6. What is the current comprehensive plan designation of the site? single-family residential

7. If applicable, what is the current shoreline master program designation of the site?

n/a

8. Has any part of the site been classified as a critical area by the city or county? If so, specify.

Yes, there is a steep slope critical area on the western border of the property, adjacent to 97th Ave SE.

9. Approximately how many people would reside or work in the completed project? 4

10. Approximately how many people would the completed project displace? 0

11. Proposed measures to avoid or reduce displacement impacts, if any.

None.

12. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any.

The project does not change the site's land use.

DW

13. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any.

n/a

Housing

1. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

1 housing unit, high income

2. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

1 housing unit, high income

3. Proposed measures to reduce or control housing impacts, if any.

None.

Aesthetics

1. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

32 feet

2. What views in the immediate vicinity would be altered or obstructed?

None.

DW

3. Proposed measures to reduce or control aesthetic impacts, if any

None.

Light and Glare

1. What type of light or glare will the proposal produce? What time of day would it mainly occur?

None known.

2. Could light or glare from the finished project be a safety hazard or interfere with views?

No.

3. What existing off-site sources of light or glare may affect your proposal?

None.

4. Proposed measures to reduce or control light and glare impacts, if any.

None.

Recreation

1. What designated and informal recreational opportunities are in the immediate vicinity?

The nearest park access is approximately .25 miles from the property at Chism Beach Park.

2. Would the proposed project displace any existing recreational uses? If so, describe.

No.

DW

3. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any.

None.

Historic and Cultural Preservation

1. Are there any buildings, structures or sites located on or near the site that are over 45 years old listed in or eligible for listing in national, state or local preservation registers located on or near the site? If so, specifically describe.

No.

2. Are there any landmarks, features or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

None known.

3. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

According to WISAARD, there are no such cultural resources within the study area.

DW

4. Proposed measures to avoid, minimize or compensate for loss, changes to and disturbance to resources. Please include plans for the above and any permits that may be required.

Should historic, archaeological, scientific or cultural significant items be encountered during implementation of this project, work would be temporarily stopped while the appropriate agencies are notified.

Transportation

1. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

97th Ave SE is the only street serving the site; access will be provided via a driveway on the southern portion of the western property boundary.

2. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

Yes, the West Bellevue neighborhood is served by public transit. The nearest stops to the property are on Bellevue Way SE.

3. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

The proposal eliminates a two car garage and replaces it with a three car garage.

4. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

No.

DW

5. Will the project or proposal use (or occur in the immediate vicinity of) water, rail or air transportation? If so, generally describe.

No.

6. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and non-passenger vehicles). What data or transportation models were used to make these estimates?

The assumption would be a no net change in traffic or vehicle trips, as the property's use will remain single-family residential.

7. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No.

8. Proposed measures to reduce or control transportation impacts, if any.

None.

DW

Public Service

1. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

No.

2. Proposed measures to reduce or control direct impacts on public services, if any.

None

Utilities

1. Check the utilities currently available at the site:
   - ☑ Electricity
   - ☑ natural gas
   - ☑ water
   - ☑ refuse service
   - ☑ telephone
   - ☑ sanitary sewer
   - ☐ septic system
   - ☐ other

2. Describe the utilities that are proposed for the project, the utility providing the service and the general construction activities on the site or in the immediate vicinity which might be needed.

No new utilities are proposed for the project.

DW

Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

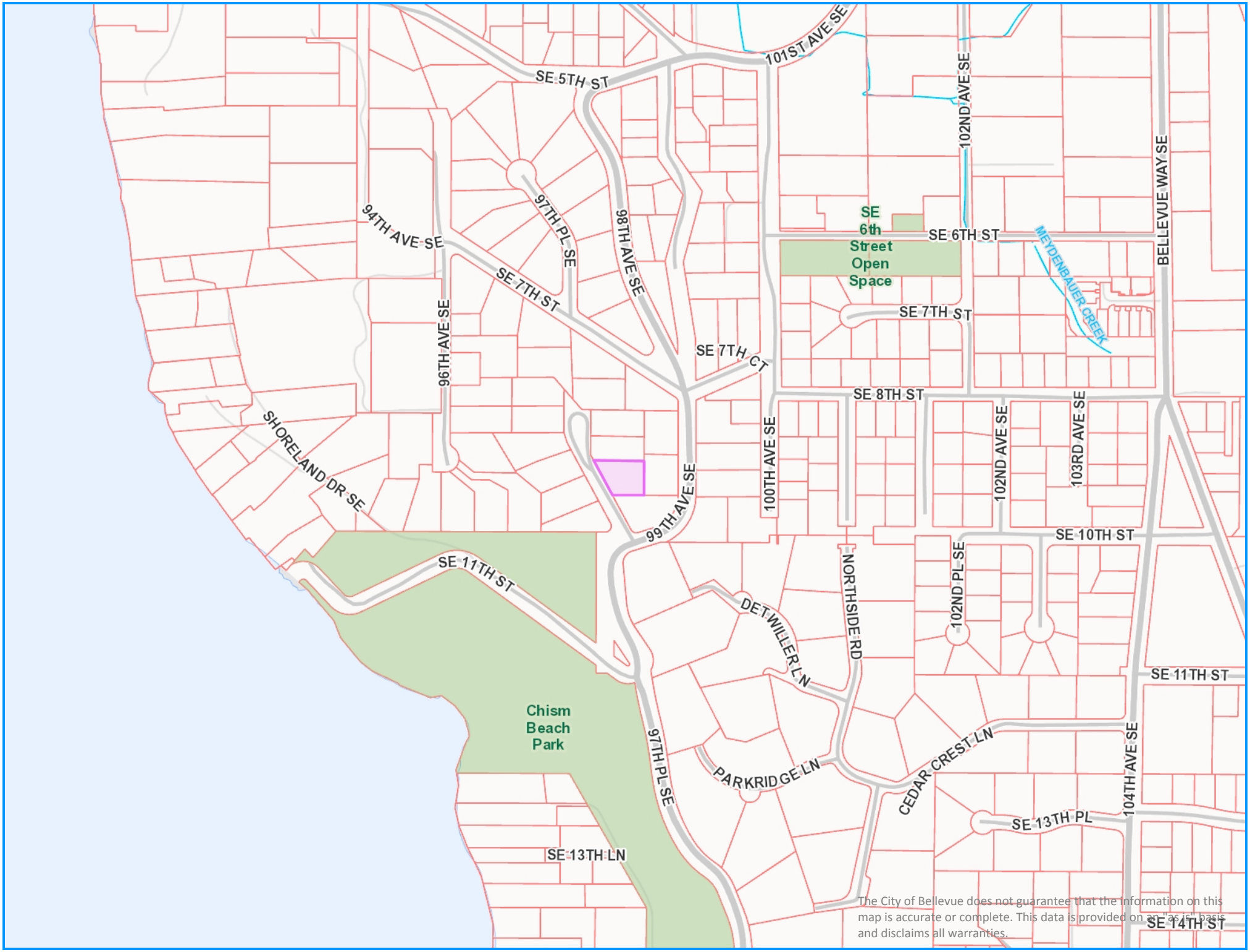
Signature 

Name of signee Michael Thai

Position and Agency/Organization Environmental Scientist, The Watershed Company

Date Submitted October 21, 2019

DW



Critical Areas Report

KASSAM RESIDENCE

CITY OF BELLEVUE

September 30, 2019

Prepared for:

City of Bellevue
PO Box 90012
Bellevue, WA 98009-9012

Prepared on behalf of:

Faizel Kassam
849 97th Avenue SE
Bellevue, WA 98004

THE WATERSHED COMPANY

Title-page image: View of current residence and southern portion of steep slope area (left) taken from 97th Ave SE looking north (September 4, 2019).

THE WATERSHED COMPANY

750 Sixth Street South
Kirkland, WA 98033

p 425.822.5242
f 425.827.8136

watershedco.com

Reference Number: 190630

Contact: Mike Thai
Environmental Scientist

Table of Contents

1. Introduction 1
   1.1 Background and Purpose 1
   1.2 Methods 1
2. Subject Property 2
   2.1 Location and Description 2
3. Critical Areas 4
   3.1 Geologic Hazard Areas 4
      3.1.1 Habitat Functions 4
   3.2 Species of Local Importance 9
   3.3 Water Quality, Hydrology, and Slope Stability Functions 9
4. Local Regulations 10
   4.1 Steep Slopes 10
      4.1.1 Critical Area Functions Based on Application of Code Standards 10
      4.1.2 Modification 11
   4.2 Habitat Associated with Species of Local Importance 11
5. Project 11
   5.1 Description 11
      5.1.1 Project Purpose 12
   5.2 Mitigation Sequencing 12
   5.3 Impacts 13
      5.3.1 Critical Area Impact Assessment 13
   5.4 Mitigation 15
      5.4.1 Critical Area Mitigation 15
   5.5 Critical Area Functional Lift Analysis 15
      5.5.1 Water Quality, Hydrology, and Slope Stability 15
      5.5.2 Habitat 16
6 Critical Areas Report Criteria 17
7 Summary 22

Appendix A
   Mitigation Plan

List of Figures

Figure 1. Vicinity and street level map (King County iMap). 3
Figure 2. Steep slope critical area from 97th Ave SE, looking southeast..... 5
Figure 3. Steep slope critical area toe-of-slope, looking north..... 5
Figure 4. Eastern half of property containing introduced shrubs, a few ferns, and hazel nut trees, looking north..... 6
Figure 5. Northeastern portion of the property, looking north. 6
Figure 6. Northern property boundary as seen from the northeastern portion of the property, looking west. 7
Figure 7. Southwestern portion of property, adjacent to current driveway. 7
Figure 8. Southeastern portion of the property as seen from southeastern corner of the current residence, looking southeast. 8

List of Tables

Table 1. Project impact summary (quantities in square feet). 13

1. Introduction

1.1 Background and Purpose

The purpose of this report is to document critical area and buffer/setback impacts associated with the proposed redevelopment project located at 840 97th Avenue SE in the City of Bellevue, Washington (Figure 1). The subject property is comprised of a single lot which is currently developed with a single-family residence. A steep slope area (1,202 square feet) on the northwest portion of the property, adjacent to 97th Ave SE, encumbers development on the parcel due to its required setback. Other than the residence and driveway, the majority of the property is currently bare ground with a number of shrubs and trees.

The applicant proposes to redevelop the property by demolishing the current residence and building a new home. The new residence would replace the existing structures footprint and be located adjacent to the on-site steep slope area and partially within its setback.

Bellevue Land Use Code (LUC) 20.25H.230 requires compliance with specific critical areas report criteria as part of any modification to a critical area or critical area buffer/setback, including a demonstration of how the development leads to equivalent or better protection of critical area functions and values. This report fulfills these criteria. Further, pursuant to LUC 20.25H.250(C)(1), this report has been prepared in conjunction with a geotechnical analysis report by Earth Solutions NW, LLC. For technical details related to geologic hazard areas, reference the project geotechnical report and/or any subsequent documentation addressing geotech-specific City comments. This report presents a detailed discussion of the habitat and vegetation on-site and how the proposed development can be achieved with no net loss of critical area functions and values.

1.2 Methods

A landscape architect/arborist and an environmental scientist visited the site on September 4, 2019 to evaluate existing site conditions. Vegetative structure and composition, special habitat features, presence/signs of wildlife species, and human disturbance were assessed. The observations made during the site visit helped inform the Mitigation Plan (Appendix A) which utilizes established trees and dominant native plant species on the site.

Publicly available sensitive areas and habitat documentation for the subject property and surrounding area were reviewed for this report. Sources include aerial photographs of the site and surrounding area (Google Earth), the King County public GIS database (iMap), Natural

Resource Conservation Service (NRCS) Web Soil Survey, and Washington Department of Fish and Wildlife (WDFW) Priority Habitat and Species (PHS) online data.

2. Subject Property

2.1 Location and Description

The subject property is located at 840 97th Ave SE (parcel number: 5491700230) in the City of Bellevue. 97th Ave SE borders the property to the west with residential lots to the north, south, and east. The subject property is 0.37 acres in size with the only access on the western boundary via 97th Ave SE. The parcel drops in elevation from west to east, with the steepest drop immediately adjacent to 97th Ave SE, where there is a steep slope critical area on the northern half of the western boundary. The property continues to gradually drop in elevation from the toe of the steep slope area to the eastern property boundary. The property currently includes a single-family residence and driveway with the remaining area covered in bare ground, and several shrubs and trees. Existing on-site vegetation is discussed in detail in Section 3 of this report.

The subject property is located within the East Lake Washington – Bellevue North drainage basin in WRIA 8. Any surface or groundwater on the site would be expected to flow east, away from the steep slope area. No wetlands or streams were identified on-site during field investigations.

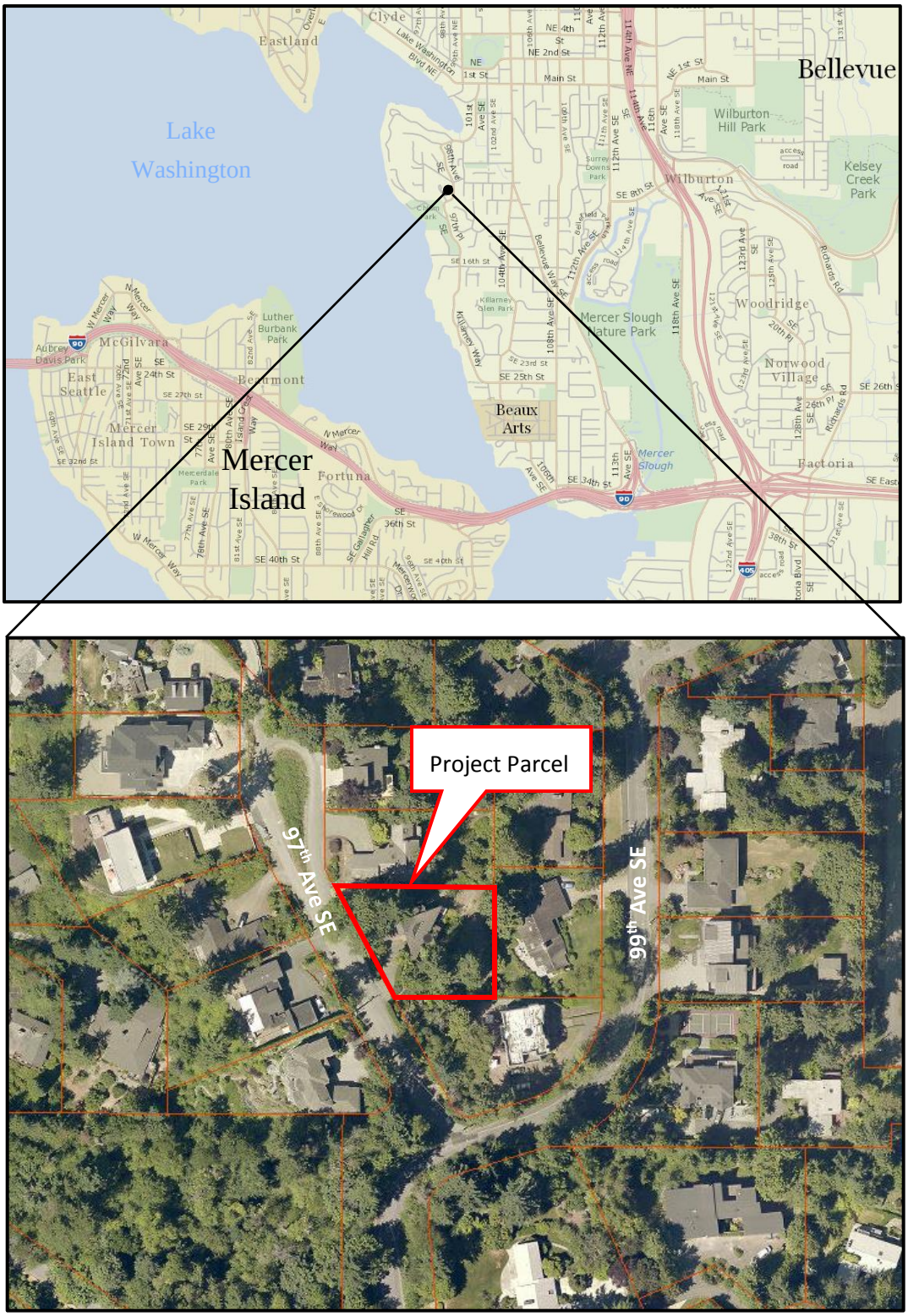


Figure 1. Vicinity and street level map (King County iMap).

3. Critical Areas

3.1 Geologic Hazard Areas

The subject property contains an area that meets the City's definition for a steep slope critical area as a type of geologic hazard area regulated under Bellevue's Land Use Code. The area regulated as a steep slope has been determined by the project surveyor. The steep slope area is 1,202 square feet and located along the northern half of the western border of the property, adjacent to 97th Ave SE and slopes downward to the east into the parcel. Vegetation located in and adjacent to this critical area provides the functions discussed below. The steep slope setback area was created using guidance from the City and starts parallel to the steep slope critical area and extends down gradient 75 feet based on the contours of the site, see Earth Solutions NW, LLC's Geotechnical Engineering Study for more details.

3.1.1 Habitat Functions

Vegetation, whether located within or outside of critical areas and associated buffers/setbacks, inherently provides some habitat functions. Habitat functions of the subject property have been assessed and are discussed in this section, consistent with the requirements of City of Bellevue's Land Use Code.

3.1.1.1 On-site Habitat

Vegetation on site consists of bare ground, native and introduced shrubs and small trees (e.g., rhododendron, hazel nut, laurel, and ivy), and eleven significant trees (Douglas fir, western red cedar, and bigleaf maple). Bare ground covers most of the property not occupied by the current residence, driveway, or steep slope area. The steep slope area is heavily vegetated and contains two significant trees (bigleaf maple and Douglas fir), small trees and shrubs (vine maple and rhododendron), and other herbaceous plants (ferns). The steep slope setback area contains one significant tree and some bare ground but mostly consists of the existing infrastructure including the residence, driveway, and back porch.

Figure 2. Steep slope critical area from 97th Ave SE, looking southeast.

Figure 3. Steep slope critical area toe-of-slope, looking north.

Figure 4. Eastern half of property containing introduced shrubs, a few ferns, and hazel nut trees, looking north.

Figure 5. Northeastern portion of the property, looking north.

Figure 6. Northern property boundary as seen from the northeastern portion of the property, looking west.

Figure 7. Southwestern portion of property, adjacent to current driveway.

Figure 8. Southeastern portion of the property as seen from southeastern corner of the current residence, looking southeast.

3.1.1.2 Off-site Habitat

The opportunity for the subject property to provide habitat is dependent upon the potential for the greater vicinity to act as a source for wildlife. Therefore, the presence or absence of habitat patches in the landscape surrounding the subject property is considered in this assessment.

The general habitat type used to categorize the study area vicinity is Urban and Mixed Environs in the Medium-density Zone (Johnson and O'Neil 2001). This habitat type contains light industry mixed with dense residential development and some natural open spaces.

The area surrounding the subject property is urban and dominated by single-family residential homes. Habitat areas within approximately 1/4 mile of the project site include South Fork Meydenbauer Creek to the northeast and Lake Washington to the west and north, both habitat areas are highly developed and provide only a small amount of corridor habitat. All adjacent properties are single-family residences and contain some tree cover. Although tree cover is a moderate portion of several properties within the vicinity of the site, there is a lack of connection between canopies due to residences, fences, roads, and other infrastructure.

3.1.1.3 Wildlife

Wildlife species expected to utilize the project site most are species that are adapted to living in urban settings, and that are not closely associated with wetland or stream environments. These species generally include raccoons, opossums, Eastern gray squirrel, rats, mice, bats, birds such as crows, starlings, robins, chickadees, and sparrows, to name a few.

During site investigations, no species of local importance were observed on the subject property, nor was habitat observed that is expected to have a primary association with any species of local importance given the local and landscape-level conditions (see Section 3.2).

3.2 Species of Local Importance

The City of Bellevue designates habitat associated with species of local importance as a critical area [LUC 20.25H.150(B)]. As noted in 3.1.1.3, wildlife use on site is expected to be limited to mainly urban species. However, it is possible that some habitat on site could occasionally be used by species of local importance. Species of local importance [LUC 20.25H.150(A)] for which suitable habitat exists on the study property are pileated woodpecker and red-tailed hawk. The likelihood of each of these species utilizing the property is discussed below.

Pileated woodpeckers commonly use large conifers for drumming and foraging. The species is often spotted in suburban areas in King County. Individuals may occasionally use the large trees on the property, although the species' preferred large snags are not present. Suitable nesting sites for this species do not exist on the property.

Red-tailed hawks nest in large trees, and although no active nests are present, the on-site trees may be suitable for the species. However, nests are generally located in more extensive woodlands than the site and surrounding area offers. Red-tailed hawks are ubiquitous in this area and are likely to occasionally perch on or fly over the property.

3.3 Water Quality, Hydrology, and Slope Stability Functions

In addition to habitat functions, vegetation also provides important water quality, slope stabilizing, and hydrological functions. The ability of the site to perform these functions well is dependent upon the quantity and quality of vegetation present (e.g., forested versus mowed lawn). Currently the parcel is approximately a third developed and covered in impervious surfaces, while most of the other two thirds is covered by bare ground. Although the trees and shrubs on the property help with these functions, the area of impervious surface and bare ground greatly impair the parcel's overall ability to perform these functions. Outside of the densely vegetated steep slope area, the vegetation is very sparse; large overgrown shrubs are

dispersed on the western portion of the property along with some hazel nut and fruit trees along the southern property boundary. Just east of the current driveway along both sides of the "rockery" there is dense ivy with no other plants mixed in. Lastly, other than three ferns scattered on the western half of the property, the only other vegetation present are the significant trees outlined in the arborist report. The lack of understory vegetation on-site in exchange for hard, bare ground inhibits the site's ability to slow runoff to allow for infiltration, reducing the property's water filtration and slope/sediment stabilizing functions.

As previously mentioned, the steep slope area on the property is heavily vegetated with shrubs, several trees, and herbaceous plants, which helps to avoid erosion by preventing runoff from concentrating and increasing in velocity as it moves downgradient. The extensive root systems developed by trees and shrubs also help to provide slope stability by holding the soil in place while also allowing for a higher amount of water infiltration.

4. Local Regulations

4.1 Steep Slopes

In Bellevue, steep slope critical areas are regulated in Part 20.25H (Critical Areas Overlay District) of the LUC. According to LUC 20.25H.120(A)(2), slopes of 40 percent or more that have a rise of at least 10 feet and exceed 1,000 square feet in area are designated as geologic hazard areas and therefore subject to the regulations of LUC 20.25H.120 through 20.25H.145. According to LUC 20.25H.035, steep slope critical areas require a top-of-slope buffer of 50 feet and a toe of slope setback of 75 feet.

The western portion of the northern half of the property is encumbered by a steep slope and its associated setback. The proposed project includes development within portions of the steep slope and its associated setback. The impacts incurred by the proposed development within the designated critical area, excluding the footprint of the existing residence (LUC 20.25H.035.B), are subject to the mitigation sequencing criteria of LUC 20.25H.215.

4.1.1 Critical Area Functions Based on Application of Code Standards

If the regulations and standards of the LUC were applied to this site, the current residence would remain and the existing vegetation (mostly introduced) would continue to provide sparse wildlife habitat and impaired water quality, hydrological, and slope/sediment stabilizing functions. The larger native trees would likely continue to proliferate while the non-native shrubs would continue to expand and choke out the few native shrubs and herbaceous vegetation that are left on the site. The steep slope area would likely remain unchanged and the non-native rhododendron would continue to take over the area, choking out native species.

Overall, there would be a negative effect on native species on the site and native colonization would continue to be hindered, and overtime critical area functions and values would be expected to decrease.

4.1.2 Modification

Steep slopes and steep slope buffers/setbacks can only be modified through an approved critical areas report. The applicant must demonstrate that the modifications to the critical area, buffer, and setback, combined with any restoration efforts, will result in equivalent or better protection of critical area functions and values than would result from adhering to the standard application of the regulations (LUC 20.25H.230). Restoration activities would require monitoring and maintenance in accordance with LUC 20.25H.220, consistent with an approved restoration plan.

4.2 Habitat Associated with Species of Local Importance

As noted above, habitat associated with species of local importance is also regulated as a critical area according to LUC 20.25H.150(B). In this context, "habitat" is defined as "the place, including physical and biotic conditions, where a plant or animal usually occurs and is fundamentally linked to the distribution and abundance of species."

As described in Section 3.2, there is no on-site evidence of the presence of habitat associated with species of local importance. Some of the trees on site could also occasionally support migrating or foraging bird species. However, the habitat on site is unlikely to be used extensively by any of these species. Furthermore, Washington Department of Fish and Wildlife (WDFW) Priority Habitat Species (PHS) data does not show the presence of any priority species within the vicinity. Therefore, it is The Watershed Company's opinion that the site is unencumbered by critical area habitat that has a primary association with species of local importance.

5. Project

5.1 Description

The proposed project aims to redevelop the parcel by removing the existing residence and constructing a larger, modern residence in its place. The new residence will be approximately 6,368 square feet with the residence and both porches, covering 3,698 square feet of the lot. The new residence will be positioned over the existing footprint of the current residence and adjacent to the steep slope critical area to avoid impacts to as many significant trees as possible.

The redevelopment will include a larger driveway and new stairs to provide safe pedestrian access from the road to the house during inclement weather.

Unavoidable impacts to the steep slope critical area and associated toe-of-slope setback will occur as a result of this redevelopment. To compensate for these impacts an on-site mitigation plan is proposed.

5.1.1 Project Purpose

The purpose of the proposed project is to replace an outdated and undersized single-family residence with an updated residence. The existing structure, constructed in 1975, is deteriorating, and the property owner proposes to demolish and remove the existing structure and construct a new residence. The goal in constructing a new residence is to create a structure that will contain all the essential components of a contemporary residence and be consistent with new and existing development within the area. Existing residences within the immediate vicinity of the subject parcel range in size (footprint) from approximately 2,700 square feet to 4,200 square feet. The proposed residence, with a footprint of approximately 3,700 square feet, would be compatible with existing residences within the neighborhood.

5.2 Mitigation Sequencing

Pursuant to LUC 20.25H.215, attempts to avoid and minimize impacts to the on-site steep slopes, buffers, and setbacks have been taken.

Avoidance. The significant trees on the property are clustered within the central portion of the southern half of the property, with several trees along the eastern and western property boundaries. The current residence is also positioned adjacent to the steep slope critical area, thus the proposed project uses the current development footprint and the area with the least amount of significant trees to minimize overall impacts on the site. The limited impacts to the steep slope area itself are due to stormwater management measures designed to meet the City's requirements. No further impacts or grading on the steep slope is proposed. With the steep slope setback area extending through most of the northern half of the property and significant trees occupying the southern half of the property, complete avoidance of impacts while developing this site is not possible.

Minimization. As described above, the design of the proposed structure included consideration of the surrounding neighborhood. In addition, however, minimization techniques were used during the design process in order to limit impact. Design of the proposed residence and associated hardscapes utilizes the existing impervious area footprint on-site, which resides within and adjacent to the steep slope area and its associated toe-of-slope setback. Design of the proposed residence in this location includes nearly full use of the existing residential footprint,

limiting the total amount of impacts to the standard setback. The design utilizes the most vacant part of the properties buildable footprint by positioning itself in the area where the fewest trees and native plants are present. The site's restoration plan includes a substantial increase in plant cover over existing conditions. Furthermore, standard best management practices, including temporary erosion and sediment control measures, will be implemented during construction and a permanent stormwater management system will be installed to manage the site's increase in impervious surface area.

Mitigation. As mitigation for unavoidable, permanent steep slope and setback impacts, 1,665 SF of the site will be enhanced through invasive weed removal and native plant installation within the southern portion of the property (see details in next section and Appendix A).

5.3 Impacts

5.3.1 Critical Area Impact Assessment

Project impacts to critical areas and setbacks are summarized in Table 1, below, and discussed in detail in the following sub-sections.

Table 1. Project impact summary (quantities in square feet).

Critical Area Types and Locations	Existing Impacts	Proposed Impacts[1]
ON-SITE		
Steep Slope Critical Area	0	25 SF
75-ft Toe of Slope Setback	2,174 SF	1,665 SF

[1] Does not include footprint of the existing residence.

5.3.1.1 Direct Impacts

Direct, permanent impacts to the steep slope area from the portions of the stormwater drainage system total 25 SF. New permanent impacts, totaling 1,665 SF, are also proposed to the steep slope setback area. Together, these impacts total 1,690 SF of new total impacts. Existing impacts that will be redeveloped include a portion of both the driveway and porch, totaling 653 SF. Of the existing impacts (653 SF) 64 SF will not be redeveloped as impervious surface, therefore a net increase in 1,626 SF of permanent impacts is expected. A total of five significant trees (#439, 487, 458, 3 and 1, see arborist report and Tree Removal and Retention Plan) will be removed as part of proposed activities, with 59% of the diameter inches of significant trees existing on site being retained. Temporary clearing and grading impacts will also occur with 10,540 SF being cleared for the construction of the home and 1,900 SF being cleared for the mitigation plantings.

These impacts have the potential to reduce the critical area functions discussed in Section 3.1 (habitat, water quality, hydrology, and slope stability). No significant adverse impacts to water quality and hydrology are anticipated from the proposal since the project must adhere to the City's regulations related to stormwater. Furthermore, the project has been developed in coordination with a geotechnical expert to ensure slope stability is maintained or improved. See Section 5.5 for additional detail.

5.3.1.2 Indirect Impacts

Disturbances associated with the proposed redevelopment of the property, like increased light and noise, are types of indirect effects on wildlife and habitat that can result from the proposed project. Introduction of domestic pets and fertilizer/herbicide use in landscaped areas are also potential sources of indirect effects to wildlife/habitat from the proposed use. However, indirect impacts are not likely to significantly increase since the parcel is currently developed with a single-family residence. Redevelopment will increase the impervious/hardscape surfaces on-site because of the increases in size of the residence and driveway, the larger residence may also increase on-site light pollution. However, modern techniques and other low-impact development measures will be implemented where feasible. The proposed redevelopment also includes an increase in vegetation on-site, primarily as native landscaped areas. Thus, indirect impacts will be offset with an increase in native plantings as a result of the on-site mitigation plan.

5.3.1.3 Cumulative Impacts

Impacts that result from collective changes over the landscape have the potential to affect habitat over time. The area surrounding the project site is wholly developed with dense residential housing. While some development or re-development can be expected, the overall character of the urban setting is not likely to change substantially. Areas developed as residential and other urban land uses trend toward less mature native vegetation and more ornamental vegetation and impervious surface. The proposed project is consistent with this trend in that impervious surfaces will increase, and 41% of significant tree diameter inches will be removed. However, the functions of retained habitat will be improved, not further degraded, once proposed mitigation activities are implemented. Retained habitat is not likely to be developed further because of required mitigation maintenance and monitoring standards.

If nearby land is redeveloped in a manner similar to what is proposed for this project, anticipated changes to habitat in the landscape may include a reduction in habitat quantity and improved quality of retained habitat areas. Overall, the cumulative impacts to urban habitat from relatively small development proposals like this one are expected to be minor. This is primarily because all the surrounding area has been developed and is unlikely to substantially

change in the foreseeable future. Additionally, similar proposals may require restoration of degraded habitat areas (as does this one), in which case, wildlife habitat would benefit.

5.4 Mitigation

5.4.1 Critical Area Mitigation

The proposed mitigation plan (Appendix A) seeks to enhance a total of 1,665 SF of the site through invasive species removal and the planting of native trees, shrubs, and groundcover plants on-site. Due to the lack of available area within the steep slope setback, the mitigation plantings will occur on and adjacent to another much smaller incline along the southwestern border of the property. The design of the residence and nature of the site does not allow for habitat created from mitigation to be connected to the steep slope area. Specifically, the topography of the site, along with the sensible desire to re-use much of the existing disturbed area of the site for the new residence, results in little to no area within the standard setback for new native plantings. Therefore, it is our professional opinion that habitat created outside of the setback should be placed in an area most beneficial to the ecology of the property. Removing the introduced ivy and stabilizing the smaller slope with native plantings and adding a more developed understory beneath the largest cluster of trees on the property would give the most ecological benefit to the site. These restoration actions will serve as mitigation for the 1,665 SF of new structural/impervious coverage within the steep slope and setback areas (Table 1).

5.5 Critical Area Functional Lift Analysis

5.5.1 Water Quality, Hydrology, and Slope Stability

Existing Conditions. The existing steep slope area is primarily vegetated with an introduced species of rhododendron with several other plants mixed in including a vine maple, a few ferns, a Douglas fir, a big leaf maple, and ivy. The vegetation along the steep slope currently provides a stable and elaborate root system that can intercept some stormwater runoff from 97th Ave SE allowing for infiltration, can slow water coming down the slope, and holds the soil in place helping to prevent erosion. Most the steep slope is covered by introduced species and contains little understory vegetation that would greatly improve soil quality and in turn water infiltration into the soil by further slowing water flowing down gradient.

There is little functional habitat within the current toe-of-slope setback as the current residence resides there. There is a lone, large Douglas fir that provides some habitat, adjacent to the northern wall of the existing home, in addition to a large rhododendron and an ornamental plum. Other than the previously mentioned three plants, the setback area is comprised of either impervious surface or bare ground.

Proposed Conditions. The proposed project would redevelop the site with a larger residence in accordance with City regulations in place of the current residence's footprint, enlarging the impact within the steep slope's toe-of-slope setback. The steep slope will be slightly encroached upon by the stormwater management system running adjacent to the driveway and tree #3 will have to be removed due to development within the critical root zone. Native Trees, herbaceous plants, and shrubs will be planted along the small incline and understory within the southwestern portion of the property. This will provide a dense and diverse plant community on the property and deliver the greatest lift in habitat quantity and quality available on the property. The mitigation plan will also tie this new habitat into a larger area of existing trees and landscaping on the adjacent property to the south.

Net Result. Water quality, hydrology, and soil stabilizing functions are improved by the installation of the permanent stormwater management system and the planting of native understory plants in the southern portion of the property. These measures will decrease the amount of surface flow running off the property and increase natural infiltration on the property. Further, the addition of new native plantings to the site will provide for increased filtration of surface flows, potentially improving water quality functions. Finally, stability within the steep slope area will be maintained through retention of existing vegetation. Stability within the secondary (non-regulated) slope area will be improved through implementation of the proposed restoration plan. Overall, water quality, hydrology, and slope stability functions are expected to be improved as a result of the proposed project.

5.5.2 Habitat

Existing Conditions. The existing steep slope area is partially vegetated with introduced species, with its associated toe-of-slope setback partially developed by a single-family residence and driveway. The existing vegetation on site, which consists of native significant trees and largely non-native shrubs, provides some limited habitat value to urban wildlife even though most of the property is bare ground and disconnected from larger areas of vegetation.

Proposed Conditions. Redevelop the site with a larger residence in accordance with City regulations in place of the current residence's footprint, resulting in a loss of five significant trees. Mitigation plantings will significantly increase vegetation quantity, quality, and diversity on site.

Net Result. Increase in habitat functions, specifically the southern significant tree cluster, thereby improving habitat quantity, quality, and diversity. Although a significant tree will be removed from the steep slope area, a diversification of foraging, perching, and nesting opportunities for wildlife through native plant installation will occur. New native trees, shrubs and groundcover will be installed adjacent to an off-site area of native vegetation. Overall, the

quantity and quality of habitat will be increased by planting a diverse plant community to create a dense native plant assemblage appropriate to the eco-region and growing conditions on-site. New plantings will provide food, cover, and nesting opportunities for wildlife.

6 Critical Areas Report Criteria

Steep slope critical areas, steep slope buffers, and steep slope setbacks, may be modified pursuant to LUC 20.25H.230. The Director may approve modifications if it can be shown that, through restoration, the modification will result in equivalent or better protection of critical area functions and values. The project site currently contains an area of moderate-functioning steep slope and low-functioning setback.

Per the LUC, the critical areas report must meet specific decision criteria for the Director to approve a proposal to modify the regulated steep slope and setback. Compliance with the relevant critical areas report criteria is addressed below.

LUC 20.25H.250(B) – Minimum Report Requirements

1. *Identification and classification of all critical areas and critical area buffers on the site;*
2. *Identification and characterization of all critical areas and critical area buffers on those properties immediately adjacent to the site;*

The relevant critical area and setback located on the subject property are described in Sections 3 and 4, respectively.

3. *Identification of each regulation or standard of this code proposed to be modified;*

The subject site contains one area of steep slope, as defined by LUC 20.25H.120(A)(2). Pursuant to LUC 20.25H.120(B)(1)(b) and 20.25H.120(C)(2)(b), a 75-foot toe-of-slope setback is required. The applicant proposes to construct a single-family residence and driveway within portions of the steep slope critical area and setback area.

4. *A habitat assessment consistent with the requirements of LUC 20.25H.165;*

Habitat is assessed in Section 3.1.1. Referenced requirements are addressed below under the Habitat Assessment subsection.

5. *An assessment of the probable cumulative impacts to critical areas resulting from development of the site and the proposed development;*

Cumulative impacts are discussed in Section 5.3.1.3.

6. *An analysis of the level of protection of critical area functions and values provided by the regulations or standards of this code, compared with the level of protection provided by the proposal. The analysis shall include:*
   a. *A discussion of the functions and values currently provided by the critical area and critical area buffer on the site and their relative importance to the ecosystem in which they exist;*
   b. *A discussion of the functions and values likely to be provided by the critical area and critical area buffer on the site through application of the regulations and standards of this Code over the anticipated life of the proposed development; and*
   c. *A discussion of the functions and values likely to be provided by the critical area and critical area buffer on the site through the modifications and performance standards included in the proposal over the anticipated life of the proposed development;*

Discussion of current critical area functions is provided in Section 3. Critical area functions and values expected through application of standard regulations is provided in Section 4.1.1. The anticipated improvement of functions is provided in the functional lift evaluation in Section 5.5.

7. *A discussion of the performance standards applicable to the critical area and proposed activity pursuant to LUC 20.25H.160, and recommendation for additional or modified performance standards, if any;*

No species of local importance have been determined to have a primary association with the habitat available on the property, therefore additional performance standards (WDFW recommendations) do not apply. No additional or modified performance standards are proposed.

8. *A discussion of the mitigation requirements applicable to the proposal pursuant to LUC 20.25H.210, and a recommendation for additional or modified mitigation, if any; and*

A mitigation plan (Appendix A) has been developed to meet the requirements of the LUC. No additional or modified mitigation is proposed.

9. *Any additional information required for the specific critical area as specified in the sections of this part addressing that critical area.*

None at this time.

LUC 20.25H.165(A) – Habitat Assessment

1. *Detailed description of vegetation and habitat on and adjacent to the site;*

See Section 3.1.1.

2. *Identification of any species of local importance that have a primary association with habitat on or adjacent to the site and assessment of potential project impacts to the use of the site by the species;*

No species of local importance have a primary association with on-site habitat. See Sections 3.1.1 and 3.2.

3. *A discussion of any federal, state, or local special management recommendations, including Washington Department of Fish and Wildlife habitat management recommendations, that have been developed for species or habitats located on or adjacent to the site;*

No species have a primary association are presumed to be present, thus special management recommendations do not apply.

4. *A detailed discussion of the direct and indirect potential impacts on habitat by the project, including potential impacts to water quality;*

See Section 5.3.

5. *A discussion of measures, including avoidance, minimization, and mitigation, proposed to preserve existing habitats and restore any habitat that was degraded prior to the current proposed use or activity and to be conducted in accordance with the mitigation sequence set forth in LUC 20.25H.215; and*

Mitigation sequencing is demonstrated in Section 5.2.

6. *A discussion of ongoing management practices that will protect habitat after the site has been developed, including proposed monitoring and maintenance programs.*

A mitigation plan has been developed, described in Section 5.4, and included as Appendix A, which includes five years of mitigation site monitoring and maintenance.

LUC 20.25H.145

G. *The proposed modification to the critical area or critical area buffer with any associated mitigation does not significantly impact habitat associated with species of local importance, or such habitat that could be reasonably expected to exist during the anticipated life of the development proposal if the area were regulated under this part.*

No species of local importance have a primary association with on-site habitat. See Sections 3.1.1 and 3.2.

LUC 20.25H.255 – Critical areas report – Decision criteria

To allow a steep slope critical area, buffer, or setback modification through an approved critical areas report, the Director must also find compliance with the decision criteria established in LUC 20.25H.255(A) and (B). Compliance with the relevant sections listed in LUC 20.25H.255(A) and (B) is addressed below.

A. *General.*

1. *The modifications and performance standards included in the proposal lead to levels of protection of critical area functions and values at least as protective as application of the regulations and standards of this code.*

See functional lift analysis in Section 5.5.

2. *Adequate resources to ensure completion of any required mitigation and monitoring efforts.*

The mitigation plan specifies appropriate species for planting and planting techniques, describes proper maintenance activities, and sets forth performance standards to be met yearly during monitoring to ensure that restoration plantings will be maintained, monitored, and successfully established within the first five years following implementation. Furthermore, to ensure that the proposed plantings are installed and that the five-year maintenance and monitoring plan is implemented, the applicant will post an Installation Assurance Device and a Maintenance Assurance Device prior to building permit issuance.

3. *The modifications and performance standards included in the proposal are not detrimental to the functions and values of critical area and critical area buffers off-site.*

Proposed mitigation will improve the functions of an existing sloped area on-site. Mitigation activities will have positive effects on nearby off-site areas as well by planting native trees, shrubs, and groundcover adjacent to a larger off-site forested area. These actions will improve habitat, water quality, and hydrology functions on the subject property, as well as off-site.

4. *The resulting development is compatible with other uses and development in the same land use district.*

The proposed structure is compatible with adjacent properties and surrounding development within the same land use district. Adjacent properties are single-family residential land uses constructed to a similar scale and size.

B. *Decision Criteria – Proposals to Reduce Regulation Critical Area Buffer*
   1. *The proposal includes plans for restoration of degraded critical area or critical area buffer functions which demonstrate a net gain in overall critical area or critical area buffer functions.*

A mitigation plan is included as Appendix A and a functional lift analysis is provided in Section 5.5.

2. *The proposal includes plans for restoration of degraded critical area or critical area buffer functions which demonstrate a net gain in the most important critical area or critical area buffer functions to the ecosystem in which they exist.*

See functional lift analysis in Section 5.5.

3. *The proposal includes a net gain in stormwater water quality function by the critical area buffer or by elements of the development proposal outside of the reduced regulated critical area buffer.*

See functional lift analysis in Section 5.5.

4. *Adequate resources to ensure completion of any required restoration, mitigation and monitoring efforts;*

The mitigation plan specifies appropriate species for planting and planting techniques, describes proper maintenance activities, and sets forth performance standards to be met yearly during monitoring to ensure that restoration plantings will be maintained, monitored, and successfully established within the first five years following implementation. Furthermore, to ensure that the proposed plantings are installed and that the five-year maintenance and monitoring plan is implemented, the applicant will post an Installation Assurance Device and a Maintenance Assurance Device prior to building permit issuance.

5. *The modifications and performance standards included in the proposal are not detrimental to the functions and values of critical area and critical area buffers off-site; and*

Proposed mitigation will improve the functions of an existing sloped area on-site. Mitigation activities will have positive effects on nearby off-site areas as well by planting native trees, shrubs, and groundcover adjacent to a larger off-site forested area. These actions will improve habitat, water quality, and hydrology functions on the subject property, as well as off-site.

6. *The resulting development is compatible with other uses and development in the same land use district.*

The proposed structure is compatible with adjacent properties and surrounding development within the same land use district. Adjacent properties include single-family residential land uses constructed to a similar scale and size.

Additional LUC 20.25H Criteria

Additional decision criteria related to geologic hazard areas is concurrently being addressed by Earth Solutions NW, LLC. in their geotechnical report, including the following sections:

- LUC 20.30P.140 – Critical areas report – Additional provisions for landslide hazards and steep slopes
- LUC 20.25H.125 – Performance standards – Landslide hazards and steep slopes
- LUC 20.25H.145 – Critical areas report – Approval of modification

7 Summary

Redevelopment is proposed on a property partially encumbered by a steep slope critical area and its associated toe-of-slope setback. The existing single-family residence will be removed and replaced by a larger single-family residence. The proposed redevelopment will result in temporary and new permanent impacts to the critical area and its setback.

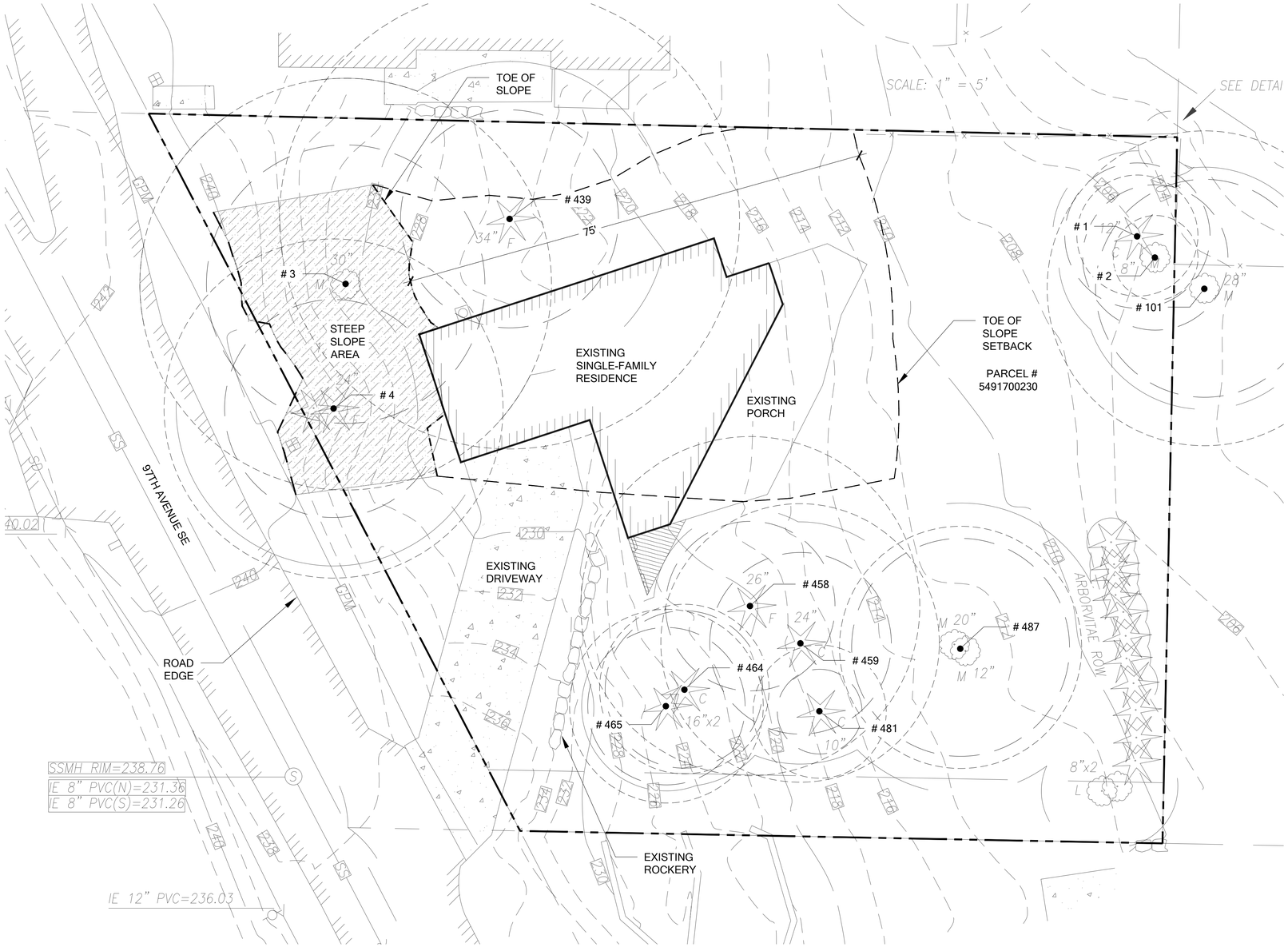
As mitigation for the proposed impacts to the steep slope area and corresponding setback, XXXX SF of the site will be planted with native vegetation. This approach follows the City's critical areas report process, as described within this document. The proposed mitigation planting plan, coupled with the redevelopment of the site, results in better ecological functionality of the site, as compared to the existing condition. No loss of ecological function is expected as a result of the proposed action. Overall, a net gain in ecological function and value is expected on the property.

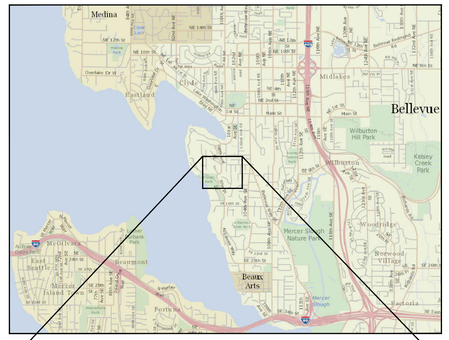
References

Johnson, D.H. and T.A. O'Neil. 2001. Wildlife-Habitat Relations in Oregon and Washington. Oregon State University Press. Corvallis, OR.

Appendix A

MITIGATION PLAN





VICINITY MAPS

LEGEND

- PARCEL BOUNDARY
- STEEP SLOPE AREA
- TOP OF SLOPE
- TOE OF SLOPE
- TOE OF SLOPE SETBACK
- EXISTING TREE

NOTES

1. SURVEY COMPLETED BY PACIFIC COAST SURVEYS, INC.; P.O. BOX 13619; MILL CREEK, WA 98082; (425) 512-7099.
2. TREE INVENTORY AND ARBORIST REPORT COMPLETED BY LAYTON TREE CONSULTING LLC; PO BOX 572; SNOHOMISH, WA 98291; 425-220-5711; 6/12/2019.

LEGAL DESCRIPTION

MEYDENBAUER HEIGHTS REPLAT, PLAT BLOCK 2, PLAT LOT 5
(KING COUNTY IMAP ASSESSOR'S REPORT)

SHEET INDEX

1	EXISTING CONDITIONS
2	PROPOSED STEEP SLOPE & SETBACK IMPACTS
3	TREE REMOVAL & RETENTION PLAN
4	MITIGATION PLAN
5	PLANTING PLAN, SCHEDULE & DETAILS
6	PLANTING & MITIGATION NOTES

0 5' 10' 20' 40'

Know what's below. Call before you dig.

EXISTING CONDITIONS

PERMIT SET - NOT FOR CONSTRUCTION

THE WATERSHED COMPANY

750 Sixth Street South
Kirkland WA 98033

p 425.822.5242
www.watershedco.com

Science & Design

KASSAM RESIDENCE

MITIGATION PLAN
PREPARED FOR: FAIZEL KASSAM
PARCEL #5491700230
840 97TH AVE SE
BELLEVUE, WA 98004

SUBMITTALS & REVISIONS

NO.	DATE	DESCRIPTION	BY
1	09-30-2019	MITIGATION PLAN PERMIT SET	LJM

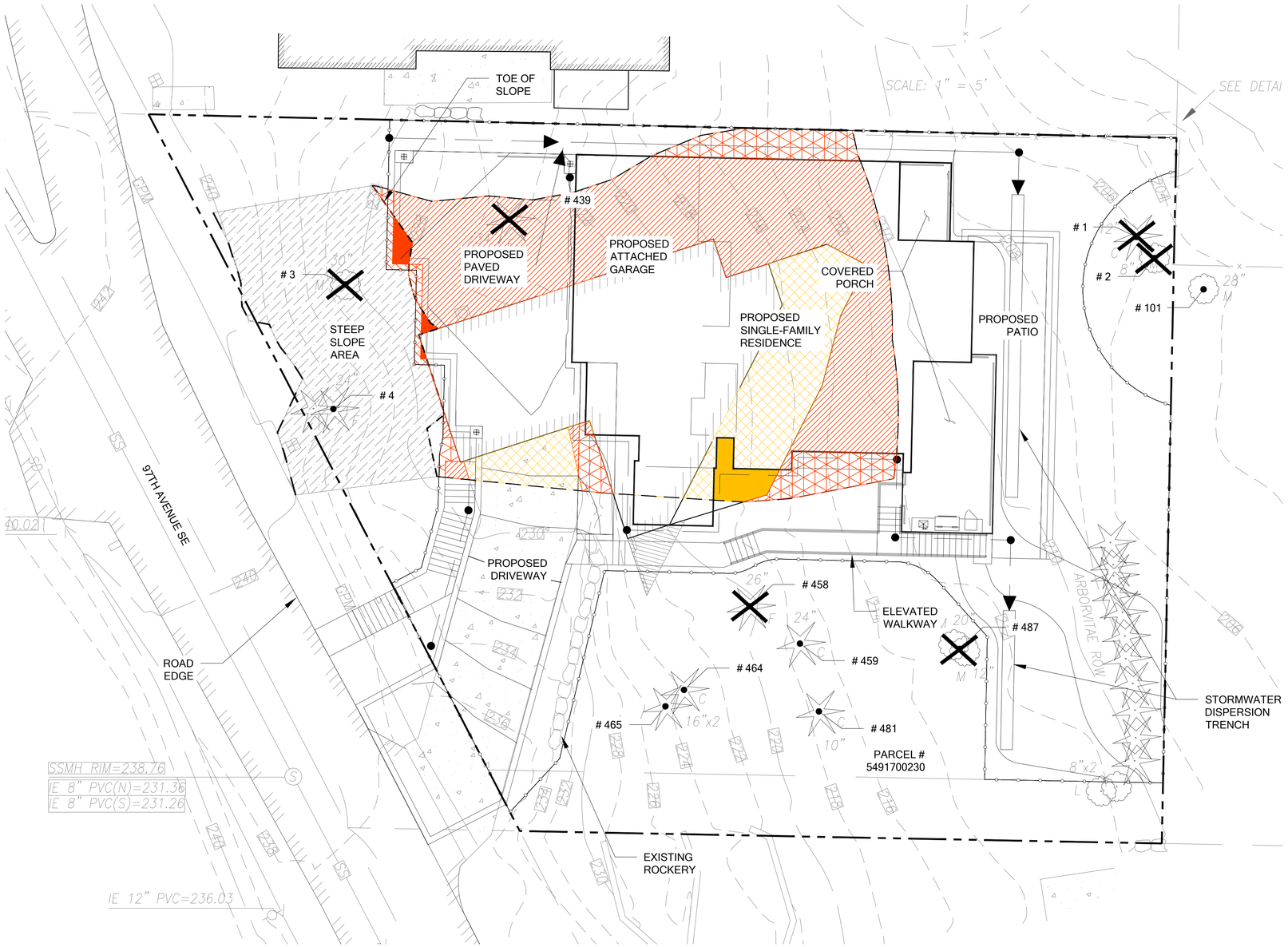
SHEET SIZE:
ORIGINAL PLAN IS 22" x 34".
SCALE ACCORDINGLY.

PROJECT MANAGER: KJB
DESIGNED: LJM
DRAFTED: LJM
CHECKED: KJB

JOB NUMBER:
190630

SHEET NUMBER:
W1 OF 6

FILENAME
PRINTED BY
DATE



LEGEND

- EXISTING CONDITIONS
- STEEP SLOPE AREA
- TOP OF SLOPE
- TOE OF SLOPE
- TOE OF SLOPE SETBACK

PROPOSED CONDITIONS

- EXISTING TREE TO BE RETAINED
- EXISTING TREE TO BE REMOVED
- EXISTING SETBACK IMPACTS TO REMAIN (653 SF)
- EXISTING SETBACK IMPACTS TO BE REMOVED (64 SF)
- PROPOSED STEEP SLOPE IMPACTS (25 SF)
- PROPOSED SETBACK IMPACTS (1,665 SF)
- PROPOSED TEMPORARY STEEP SLOPE IMPACTS TO BE RESTORED (27 SF)
- PROPOSED TEMPORARY SETBACK IMPACTS TO BE RESTORED (300 SF)
- CLEARING LIMITS

NOTES

1. SEE SHEET W3 FOR TREE REMOVAL AND RETENTION PLAN DETAILS.

PROPOSED STEEP SLOPE & SETBACK IMPACTS

0 5' 10' 20' 40'

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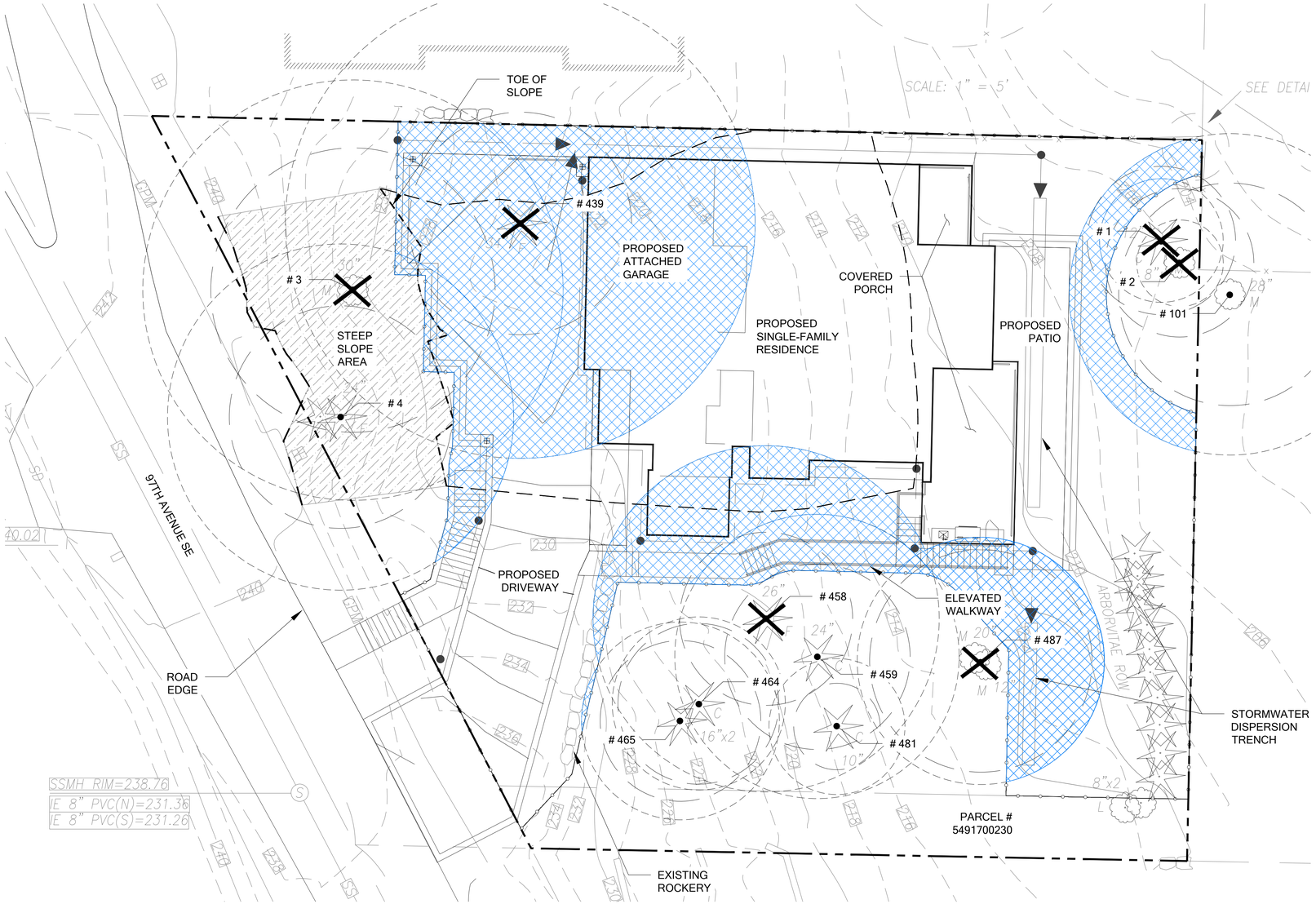

LEGEND

- EXISTING CONDITIONS
- STEEP SLOPE AREA
- TOP OF SLOPE
- TOE OF SLOPE
- TOE OF SLOPE SETBACK

PROPOSED CONDITIONS

- EXISTING TREE TO BE RETAINED
- EXISTING TREE TO BE REMOVED
- CRITICAL ROOT ZONE (CRZ) / DRIPLINE
- TREE PROTECTION ZONE (TPZ)
- PROPOSED TPZ IMPACT

NOTES

1. TREE INVENTORY AND ARBORIST REPORT COMPLETED BY LAYTON TREE CONSULTING LLC; PO BOX 572; SNOHOMISH, WA 98291; 425-220-5711; 6/12/2019.

TREE IMPACT ASSESSMENT AND PROPOSED REMOVALS

TREE TAG #	SPECIES	DBH (INCHES)	CRITICAL ROOT ZONE /DRIPLINE RADIUS (FT)	TREE PROTECTION ZONE RADIUS (FT)	IMPACTS PROPOSED WITHIN TREE PROTECTION ZONE (PERCENTAGE)	IMPACT DISTANCE FROM TRUNK (FT)	PROPOSED FOR REMOVAL
1	**WESTERN RED CEDAR**	10	12	10	18%	5	YES
2	**BIGLEAF MAPLE**	7	12	7	-	10	YES
3	**BIGLEAF MAPLE**	34	23	34	29%	6	YES
4	**DOUGLAS-FIR**	28	18	28	16%	14	-
101	**BIGLEAF MAPLE**	26	18	26	18%	19	-
439	**DOUGLAS-FIR**	38	18	38	57%	DIRECT IMPACT	YES
458	**DOUGLAS-FIR**	28	14	28	36%	5	YES
459	**REDWOOD**	23	15	23	16%	13	-
464	**WESTERN RED CEDAR**	14	13	14	-	17	-
465	**WESTERN RED CEDAR**	16	13	16	1%	15	-
481	**LAWSON CYPRESS**	11	7	11	-	25	-
487	**BIGLEAF MAPLE**	16, 12	18	20	48%	4	YES

TREE REMOVAL & RETENTION PLAN

0 5' 10' 20' 40'

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W3 OF 6

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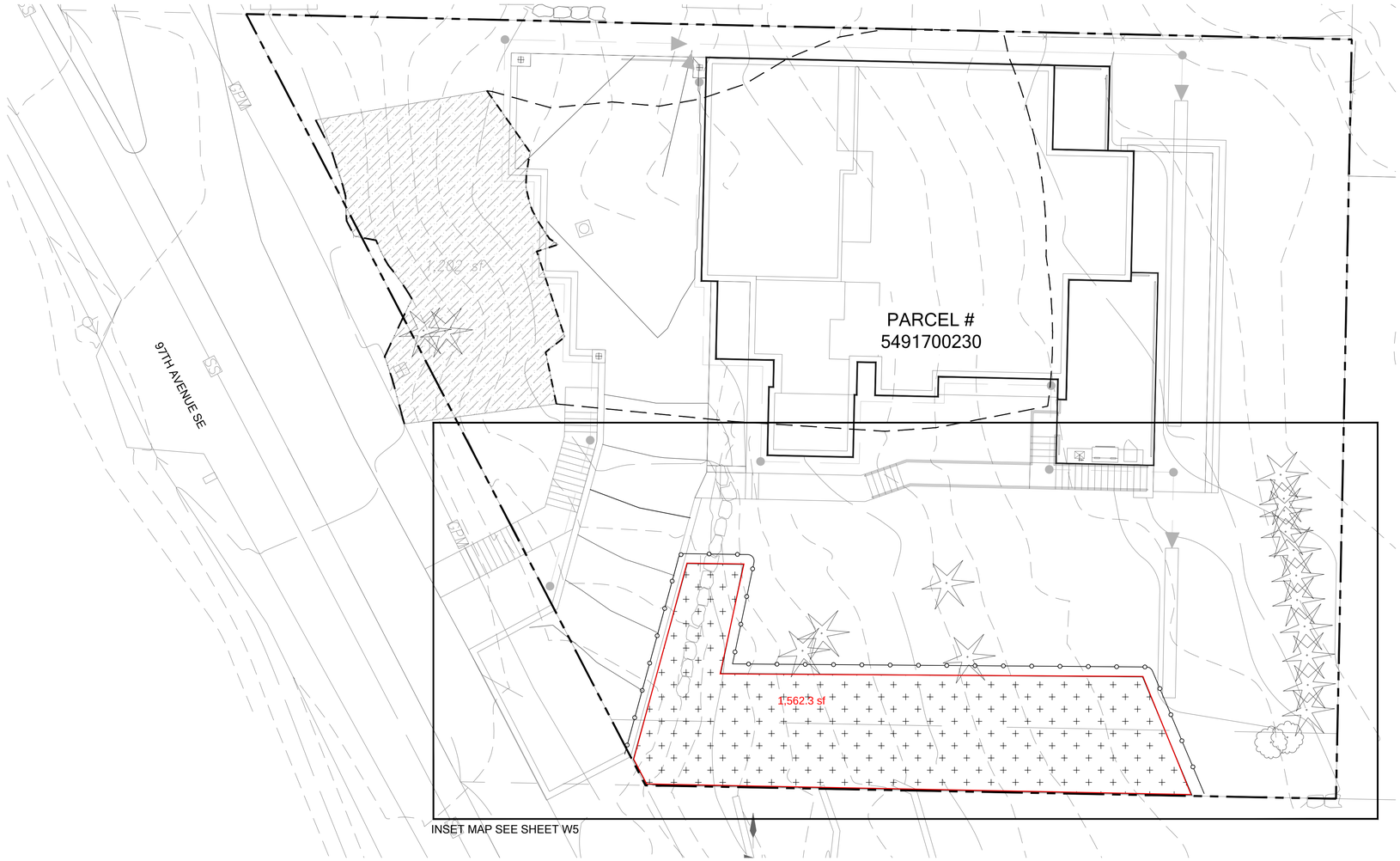
811 Know what's below. Call before you dig.

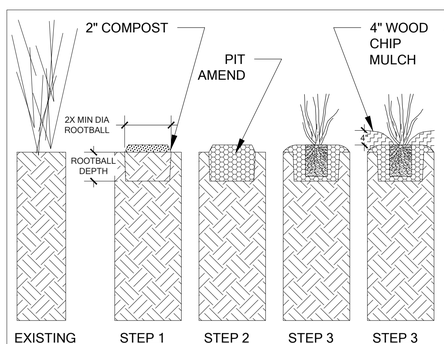


LEGEND

- PARCEL BOUNDARY
- TOP OF SLOPE
- TOE OF SLOPE
- TOE OF SLOPE SETBACK
- STEEP SLOPE SETBACK MITIGATION (1,665 SF)
- MITIGATION CLEARING LIMITS

NOTES

1. LOCATING THE MITIGATION AREA ADJACENT TO THE SLOPE OR SETBACK AREA IS NOT POSSIBLE DUE TO THE HOUSE LOCATION. THEREFORE, THE MITIGATION AREA SHOWN WAS CHOSEN BASED ON GREATEST ECOLOGICAL BENEFIT TO THE SITE. THE BENEFITS INCLUDED GREATEST REDUCTION OF INVASIVE ENGLISH IVY, AVOIDANCE OF ESTABLISHED TREES, AND CONNECTION TO ESTABLISHED FOREST ONSITE AND ON THE ADJACENT PROPERTY.



PLANTING AREA PREPARATION

STEP 1
REMOVE UNDESIRABLE SPECIES. WORK WITHIN EXISTING ROOT ZONES SHALL BE DONE BY HAND.
STEP 2
PLACE 0.13 CF / 1 GALLON OF COMPOST PER PLANTING PIT AND MIX WITH EXCAVATED SOIL.
STEP 3
LEAVE MINIMUM ONE (1) INCH LAYER OF AMENDED SOIL AT THE BOTTOM OF THE PIT THEN INSTALL PLANT (SEE PLANTING DETAIL). BACKFILL WITH AMENDED SOIL.
STEP 4
INSTALL MULCH LAYER FOUR (4) INCHES DEEP. HOLD BACK MULCH FROM TRUNKS / STEMS.

PIT AMEND EXISTING
SEQUENCE OF WORK - NOT TO SCALE

1 SOIL PREP

Scale: NTS

MITIGATION PLAN

0 5' 10' 20' 40'

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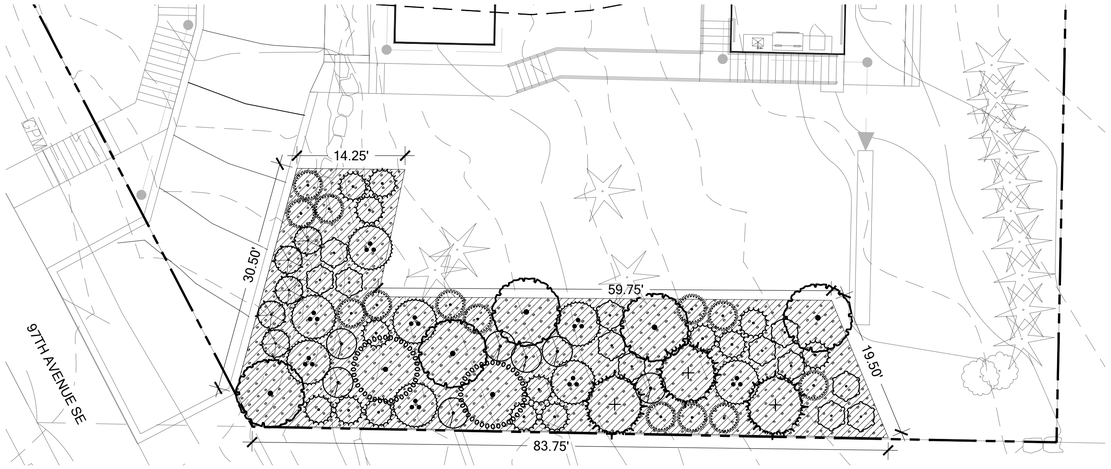
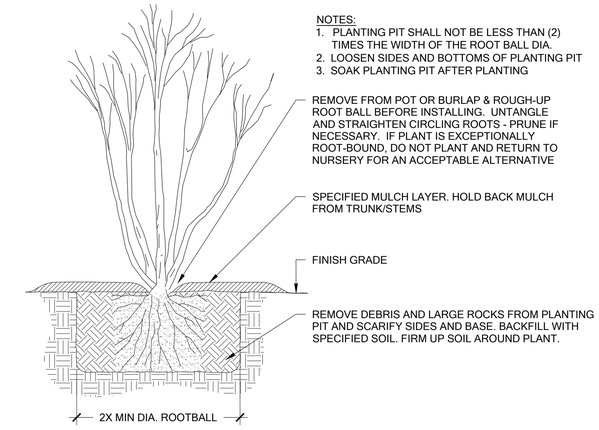


PLANT SCHEDULE KASSAM

TREES	COMMON / BOTANICAL NAME	SIZE	QTY
	CASCARA BUCKTHORN / FRANGULA PURSHIANA	5 GALLON	5
	DOUGLAS FIR / PSEUDOTSUGA MENZIESII	5 GALLON	3
	WESTERN HEMLOCK / TSUGA HETEROPHYLLA	2 GALLON	2

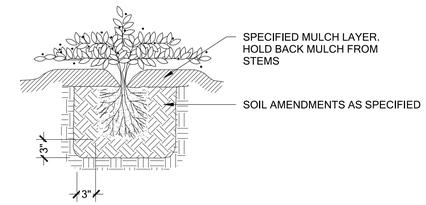
SHRUBS	COMMON / BOTANICAL NAME	SIZE	SPACING	QTY
	BEAKED HAZELNUT / CORYLUS CORNUTA	2 GALLON	72" o.c.	8
	EVERGREEN HUCKLEBERRY / VACCINIUM OVATUM	1 GALLON	48" o.c.	12
	HIGHBUSH CRANBERRY / VIBURNUM EDULE	1 GALLON	48" o.c.	5
	RED-FLOWERING CURRANT / RIBES SANGUINEUM	2 GALLON	48" o.c.	13
	SNOWBERRY / SYMPHORICARPOS ALBUS	2 GALLON	48" o.c.	7
	TALL OREGON GRAPE / MAHONIA AQUIFOLIUM	2 GALLON	48" o.c.	14

GROUND COVERS	COMMON / BOTANICAL NAME	SIZE	SPACING	QTY
	LILY OF THE VALLEY / CONVALLARIA MAJALIS	1 GALLON	18" o.c.	150
	SALAL / GAULTHERIA SHALLON	1 GALLON	24" o.c.	90
	OREGON GRAPE / MAHONIA NERVOSA	1 GALLON	24" o.c.	90
	WESTERN SWORD FERN / POLYSTICHUM MUNITUM	1 GALLON	24" o.c.	90



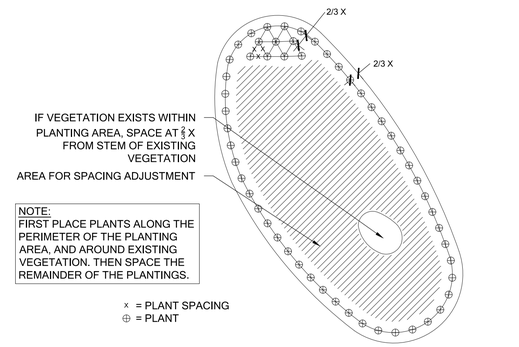
1 TREE AND SHRUB PLANTING

Scale: NTS



2 GROUNDCOVER PLANTING

Scale: NTS



3 PLANT SPACING

Scale: NTS

PLANTING PLAN, SCHEDULE & DETAILS

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SCALE ACCORDINGLY.

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CHECKED: KJB
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SHEET NUMBER: W5 OF 6

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PLANT INSTALLATION SPECIFICATIONS

GENERAL NOTES

QUALITY ASSURANCE
1. PLANTS SHALL MEET OR EXCEED THE SPECIFICATIONS OF FEDERAL, STATE, AND LOCAL LAWS REQUIRING INSPECTION FOR PLANT DISEASE AND INSECT CONTROL.
2. PLANTS SHALL BE HEALTHY, VIGOROUS, AND WELL-FORMED, WITH WELL DEVELOPED, FIBROUS ROOT SYSTEMS, FREE FROM DEAD BRANCHES OR ROOTS. PLANTS SHALL BE FREE FROM DAMAGE CAUSED BY TEMPERATURE EXTREMES, LACK OR EXCESS OF MOISTURE, INSECTS, DISEASE, AND MECHANICAL INJURY. PLANTS IN LEAF SHALL BE WELL FOLIATED AND OF GOOD COLOR. PLANTS SHALL BE HABITUATED TO THE OUTDOOR ENVIRONMENTAL CONDITIONS INTO WHICH THEY WILL BE PLANTED (HARDENED-OFF).
3. TREES WITH DAMAGED, CROOKED, MULTIPLE OR BROKEN LEADERS WILL BE REJECTED. WOODY PLANTS WITH ABRASIONS OF THE BARK OR SUN SCALD WILL BE REJECTED.
4. NOMENCLATURE: PLANT NAMES SHALL CONFORM TO FLORA OF THE PACIFIC NORTHWEST BY HITCHCOCK AND CRONQUIST, UNIVERSITY OF WASHINGTON PRESS, 2018 AND/OR TO A FIELD GUIDE TO THE COMMON WETLAND PLANTS OF WESTERN WASHINGTON & NORTHWESTERN OREGON, ED. SARAH SPEAR COOKE, SEATTLE AUDUBON SOCIETY, 1997.

DEFINITIONS
1. PLANTS/PLANT MATERIALS. PLANTS AND PLANT MATERIALS SHALL INCLUDE ANY LIVE PLANT MATERIAL USED ON THE PROJECT. THIS INCLUDES BUT IS NOT LIMITED TO CONTAINER GROWN, B&B OR BAREROOT PLANTS; LIVE STAKES AND FASCINES (WATTLES); TUBERS, CORMS, BULBS, ETC..; SPRIGS, PLUGS, AND LINERS.
2. CONTAINER GROWN. CONTAINER GROWN PLANTS ARE THOSE WHOSE ROOTBALLS ARE ENCLOSED IN A POT OR BAG IN WHICH THAT PLANT GREW.

SUBSTITUTIONS
1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN SPECIFIED MATERIALS IN ADVANCE IF SPECIAL GROWING, MARKETING OR OTHER ARRANGEMENTS MUST BE MADE IN ORDER TO SUPPLY SPECIFIED MATERIALS.
2. SUBSTITUTION OF PLANT MATERIALS NOT ON THE PROJECT LIST WILL NOT BE PERMITTED UNLESS AUTHORIZED IN WRITING BY THE RESTORATION CONSULTANT.
3. IF PROOF IS SUBMITTED THAT ANY PLANT MATERIAL SPECIFIED IS NOT OBTAINABLE, A PROPOSAL WILL BE CONSIDERED FOR USE OF THE NEAREST EQUIVALENT SIZE OR ALTERNATIVE SPECIES, WITH CORRESPONDING ADJUSTMENT OF CONTRACT PRICE.
4. SUCH PROOF WILL BE SUBSTANTIATED AND SUBMITTED IN WRITING TO THE CONSULTANT AT LEAST 30 DAYS PRIOR TO START OF WORK UNDER THIS SECTION.

INSPECTION
1. PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE RESTORATION CONSULTANT FOR CONFORMANCE TO SPECIFICATIONS, EITHER AT TIME OF DELIVERY ON-SITE OR AT THE GROWER'S NURSERY. APPROVAL OF PLANT MATERIALS AT ANY TIME SHALL NOT IMPAIR THE SUBSEQUENT RIGHT OF INSPECTION AND REJECTION DURING PROGRESS OF THE WORK.
2. PLANTS INSPECTED ON SITE AND REJECTED FOR NOT MEETING SPECIFICATIONS MUST BE REMOVED IMMEDIATELY FROM SITE OR RED-TAGGED AND REMOVED AS SOON AS POSSIBLE.
3. THE RESTORATION CONSULTANT MAY ELECT TO INSPECT PLANT MATERIALS AT THE PLACE OF GROWTH. AFTER INSPECTION AND ACCEPTANCE, THE RESTORATION CONSULTANT MAY REQUIRE THE INSPECTED PLANTS BE LABELED AND RESERVED FOR PROJECT. SUBSTITUTION OF THESE PLANTS WITH OTHER INDIVIDUALS, EVEN OF THE SAME SPECIES AND SIZE, IS UNACCEPTABLE.

MEASUREMENT OF PLANTS
1. PLANTS SHALL CONFORM TO SIZES SPECIFIED UNLESS SUBSTITUTIONS ARE MADE AS OUTLINED IN THIS CONTRACT.
2. HEIGHT AND SPREAD DIMENSIONS SPECIFIED REFER TO MAIN BODY OF PLANT AND NOT BRANCH OR ROOT TIP TO TIP. PLANT DIMENSIONS SHALL BE MEASURED WHEN THEIR BRANCHES OR ROOTS ARE IN THEIR NORMAL POSITION.
3. WHERE A RANGE OF SIZE IS GIVEN, NO PLANT SHALL BE LESS THAN THE MINIMUM SIZE AND AT LEAST 50% OF THE PLANTS SHALL BE AS LARGE AS THE MEDIAN OF THE SIZE RANGE. (EXAMPLE: IF THE SIZE RANGE IS 12" TO 18", AT LEAST 50% OF PLANTS MUST BE 15" TALL.).

SUBMITTALS

PROPOSED PLANT SOURCES
1. WITHIN 45 DAYS AFTER AWARD OF THE CONTRACT, SUBMIT A COMPLETE LIST OF PLANT MATERIALS PROPOSED TO BE PROVIDED DEMONSTRATING CONFORMANCE WITH THE REQUIREMENTS SPECIFIED. INCLUDE THE NAMES AND ADDRESSES OF ALL GROWERS AND NURSERIES.

PRODUCT CERTIFICATES
1. PLANT MATERIALS LIST - SUBMIT DOCUMENTATION TO CONSULTANT AT LEAST 30 DAYS PRIOR TO START OF WORK UNDER THIS SECTION THAT PLANT MATERIALS HAVE BEEN ORDERED. ARRANGE PROCEDURE FOR INSPECTION OF PLANT MATERIAL WITH CONSULTANT AT TIME OF SUBMISSION.
2. HAVE COPIES OF VENDOR'S OR GROWERS' INVOICES OR PACKING SLIPS FOR ALL PLANTS ON SITE DURING INSTALLATION. INVOICE OR PACKING SLIP SHOULD LIST SPECIES BY SCIENTIFIC NAME, QUANTITY, AND DATE DELIVERED (AND GENETIC ORIGIN IF THAT INFORMATION WAS PREVIOUSLY REQUESTED).

DELIVERY, HANDLING, & STORAGE

NOTIFICATION
CONTRACTOR MUST NOTIFY CONSULTANT 48 HOURS OR MORE IN ADVANCE OF DELIVERIES SO THAT CONSULTANT MAY ARRANGE FOR INSPECTION.

PLANT MATERIALS
1. TRANSPORTATION - DURING SHIPPING, PLANTS SHALL BE PACKED TO PROVIDE PROTECTION AGAINST CLIMATE EXTREMES, BREAKAGE AND DRYING. PROPER VENTILATION AND PREVENTION OF DAMAGE TO BARK, BRANCHES, AND ROOT SYSTEMS MUST BE ENSURED.
2. SCHEDULING AND STORAGE - PLANTS SHALL BE DELIVERED AS CLOSE TO PLANTING AS POSSIBLE. PLANTS IN STORAGE MUST BE PROTECTED AGAINST ANY CONDITION THAT IS DETRIMENTAL TO THEIR CONTINUED HEALTH AND VIGOR.
3. HANDLING - PLANT MATERIALS SHALL NOT BE HANDLED BY THE TRUNK, LIMBS, OR FOLIAGE BUT ONLY BY THE CONTAINER, BALL, BOX, OR OTHER PROTECTIVE STRUCTURE, EXCEPT BAREROOT PLANTS SHALL BE KEPT IN BUNDLES UNTIL PLANTING AND THEN HANDLED CAREFULLY BY THE TRUNK OR STEM.
4. LABELS - PLANTS SHALL HAVE DURABLE, LEGIBLE LABELS STATING CORRECT SCIENTIFIC NAME AND SIZE. TEN PERCENT OF CONTAINER GROWN PLANTS IN INDIVIDUAL POTS SHALL BE LABELED. PLANTS SUPPLIED IN FLATS, RACKS, BOXES, BAGS, OR BUNDLES SHALL HAVE ONE LABEL PER GROUP.

WARRANTY

PLANT WARRANTY
PLANTS MUST BE GUARANTEED TO BE TRUE TO SCIENTIFIC NAME AND SPECIFIED SIZE, AND TO BE HEALTHY AND CAPABLE OF VIGOROUS GROWTH.

REPLACEMENT
1. PLANTS NOT FOUND MEETING ALL OF THE REQUIRED CONDITIONS AT THE CONSULTANT'S DISCRETION MUST BE REMOVED FROM SITE AND REPLACED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
2. PLANTS NOT SURVIVING AFTER ONE YEAR TO BE REPLACED AT THE CONTRACTOR'S EXPENSE.

PLANT MATERIAL

GENERAL
1. PLANTS SHALL BE NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES UNDER CLIMATIC CONDITIONS SIMILAR TO OR MORE SEVERE THAN THOSE OF THE PROJECT SITE.
2. PLANTS SHALL BE TRUE TO SPECIES AND VARIETY OR SUBSPECIES. NO CULTIVARS OR NAMED VARIETIES SHALL BE USED UNLESS SPECIFIED AS SUCH.

QUANTITIES
SEE PLANT LIST ON ACCOMPANYING PLANS AND PLANT SCHEDULES.

ROOT TREATMENT
1. CONTAINER GROWN PLANTS (INCLUDES PLUGS): PLANT ROOT BALLS MUST HOLD TOGETHER WHEN THE PLANT IS REMOVED FROM THE POT, EXCEPT THAT A SMALL AMOUNT OF LOOSE SOIL MAY BE ON THE TOP OF THE ROOTBALL.
2. PLANTS MUST NOT BE ROOT-BOUND; THERE MUST BE NO CIRCLING ROOTS PRESENT IN ANY PLANT INSPECTED.
3. ROOTBALLS THAT HAVE CRACKED OR BROKEN WHEN REMOVED FROM THE CONTAINER SHALL BE REJECTED.

MITIGATION & MONITORING NOTES

THIS PLAN HAS BEEN PREPARED AS MITIGATION FOR IMPACTS TO ON-SITE CRITICAL AREAS AND SATISFIES THE REQUIREMENTS SET FORTH BY LUC 20.25H.140, 20.25H.215, AND 20.25H.220. THE PLAN SEEKS TO ENHANCE SUBSTANTIAL PORTIONS OF ECOLOGICALLY DEGRADED PORTIONS OF THE SITE NEAR THE STEEP SLOPE AND STEEP SLOPE SETBACK AREA. THE LOCATION OF THE PROPOSED HOUSE RESULTS IN THE LEAST AMOUNT OF ADDITIONAL IMPACTS AS POSSIBLE, THROUGH PLACEMENT OVER THE LOCATION OF THE EXISTING STRUCTURE ON-SITE. THIS LOCATION IS WITHIN THE STEEP SLOPE SETBACK. AREAS NEAR THE STEEP SLOPE AND SETBACK PRESENT THE GREATEST OPPORTUNITY FOR RESTORATION DUE TO HIGH AMOUNTS OF INVASIVE SPECIES AND CONNECTEDNESS TO EXISTING TREE CANOPY ON-SITE AND ON THE ADJACENT PROPERTY TO THE SOUTH. THE PROPOSED MITIGATION AREA PRESENTLY LACKS ANY NATIVE UNDERSTORY AND IS DOMINATED BY INVASIVE ENGLISH IVY. THE STEEP SLOPE IS STABILIZED BY MATURE WOODY VEGETATION, ALTHOUGH NOT ALL OF IT IS NATIVE, REMOVING THESE PLANTS COULD DE-STABILIZE TO THE SLOPE.

TO ACHIEVE THE ENHANCEMENT OBJECTIVES, THE PLAN CALLS FOR THE RESTORATION OF 1,665 SQUARE FEET OF THE SITE THROUGH THE PLANTING OF NATIVE TREES, SHRUBS, AND GROUNDCOVER. TREE SPECIES PROPOSED INCLUDE DOUGLAS-FIR, WESTERN HEMLOCK, AND CASCARA. SHRUBS INCLUDE HIGHBUSH CRANBERRY, BEAKED HAZELNUT, RED-FLOWERING CURRANT, TALL OREGON GRAPE, SNOWBERRY, AND EVERGREEN HUCKLEBERRY. PROPOSED GROUNDCOVERS INCLUDE SALAL, WESTERN SWORD FERN, LILY OF THE VALLEY, AND DULL OREGON GRAPE.

MAINTENANCE AND MONITORING PLAN

THE SITE SHALL BE MAINTAINED AND MONITORED FOR FIVE YEARS FOLLOWING SUCCESSFUL INSTALLATION. COMPONENTS OF THE 5-YEAR MAINTENANCE AND MONITORING PLAN ARE DETAILED BELOW.

GOALS

1) WITHIN THE PROPOSED RESTORATION AREAS, ESTABLISH DENSE NATIVE VEGETATION THAT IS APPROPRIATE TO THE ECO-REGION AND SITE.
2) LIMIT INVASIVE AND/OR NOXIOUS WEED COVER ON-SITE.
3) INCREASE HABITAT COVER AND REFUGE FOR SMALL MAMMALS, AND INVERTEBRATES. PROVIDE PERCHING, NESTING AND FORAGING HABITAT FOR NATIVE BIRDS.

PERFORMANCE STANDARDS

THE STANDARDS LISTED BELOW WILL BE USED TO JUDGE THE SUCCESS OF THE INSTALLATION OVER TIME. IF PERFORMANCE STANDARDS ARE MET AT THE END OF YEAR 5, THE SITE WILL THEN BE DEEMED SUCCESSFUL AND THE PERFORMANCE SECURITY BOND WILL BE ELIGIBLE FOR RELEASE BY THE CITY OF BELLEVUE.

1) SURVIVAL: ACHIEVE 100% SURVIVAL OF INSTALLED PLANTS BY THE END OF YEAR 1. THIS STANDARD CAN BE MET THROUGH PLANT ESTABLISHMENT OR THROUGH REPLANTING AS NECESSARY TO ACHIEVE THE REQUIRED NUMBERS.
2) NATIVE TREE AND SHRUB COVER:
   a. ACHIEVE 40% UNDERSTORY COVER OF NATIVE SHRUBS AND SAPLING TREES BY YEAR 2. NATIVE VOLUNTEER SPECIES MAY COUNT TOWARDS THIS COVER STANDARD.
   b. ACHIEVE 60% UNDERSTORY COVER OF NATIVE SHRUBS AND SAPLING TREES BY YEAR 3. NATIVE VOLUNTEER SPECIES MAY COUNT TOWARDS THIS COVER STANDARD.
   c. ACHIEVE 80% UNDERSTORY COVER OF NATIVE SHRUBS AND SAPLING TREES BY YEAR 5. NATIVE VOLUNTEER SPECIES MAY COUNT TOWARDS THIS COVER STANDARD.
3) NATIVE PERENNIAL AND GROUNDCOVER COVER:
   a. ACHIEVE 30% COVER OF NATIVE PERENNIALS AND GROUNDCOVER BY YEAR 2. NATIVE VOLUNTEER SPECIES MAY COUNT TOWARDS THIS COVER STANDARD.
   b. ACHIEVE 50% UNDERSTORY COVER OF NATIVE PERENNIALS AND GROUNDCOVER BY YEAR 3. NATIVE VOLUNTEER SPECIES MAY COUNT TOWARDS THIS COVER STANDARD.
   c. ACHIEVE 60% UNDERSTORY COVER OF NATIVE PERENNIALS AND GROUNDCOVER BY YEAR 5. NATIVE VOLUNTEER SPECIES MAY COUNT TOWARDS THIS COVER STANDARD.
4) SPECIES DIVERSITY: ESTABLISH AT LEAST THREE NATIVE SHRUB SPECIES BY YEAR 3 AND MAINTAIN THIS DIVERSITY THROUGH YEAR 5. ESTABLISH AT LEAST TWO NATIVE TREE SPECIES BY YEAR 5. NATIVE VOLUNTEER SPECIES MAY COUNT TOWARDS THESE STANDARDS.
5) INVASIVE COVER: AERIAL COVER FOR ALL NON-NATIVE, INVASIVE AND NOXIOUS WEEDS WILL NOT EXCEED 10% AT ANY YEAR DURING THE MONITORING PERIOD. INVASIVE PLANTS INCLUDE BUT ARE NOT LIMITED TO HIMALAYAN BLACKBERRY (RUBUS ARMENIACUS), CUT LEAF BLACKBERRY (RUBUS LACINIATUS), KNOTWEEDS (POLYGONUM CUSPIDATUM AND OTHERS), REED CANARYGRASS (PHALARIS ARUNDINACEA), CHERRY (HEDGE) LAUREL (PRUNUS LAUROCERASUS), ENGLISH HOLLY (ILEX AQUIFOLIUM), AND IVY SPECIES (HEDERA SPP.).

MONITORING METHODS

THIS MONITORING PROGRAM IS DESIGNED TO TRACK THE SUCCESS OF THE MITIGATION SITE OVER TIME AND TO MEASURE THE DEGREE TO WHICH IT IS MEETING THE PERFORMANCE STANDARDS OUTLINED IN THE PRECEDING SECTION.

AN AS-BUILT PLAN WILL BE PREPARED BY THE RESTORATION PROFESSIONAL (THE WATERSHED COMPANY [(425) 822-5242] PERSONNEL, OR OTHER PERSONS QUALIFIED TO EVALUATE ENVIRONMENTAL RESTORATION PROJECTS) PRIOR TO THE BEGINNING OF THE MONITORING PERIOD. THE AS-BUILT PLAN WILL BE A MARK-UP OF THE PLANTING PLANS INCLUDED IN THIS PLAN SET. THE AS-BUILT PLAN WILL DOCUMENT ANY DEPARTURES IN PLANT PLACEMENT OR OTHER COMPONENTS FROM THE PROPOSED PLAN.

MONITORING WILL TAKE PLACE ONCE ANNUALLY IN THE FALL FOR FIVE YEARS. YEAR-1 MONITORING WILL COMMENCE IN THE FIRST FALL SUBSEQUENT TO INSTALLATION.

THE FORMAL MONITORING VISIT SHALL RECORD AND REPORT THE FOLLOWING IN AN ANNUAL REPORT SUBMITTED TO THE CITY OF BELLEVUE:

1) VISUAL ASSESSMENT OF THE OVERALL SITE.
2) YEAR-1 COUNTS OF LIVE AND DEAD PLANTS BY SPECIES. YEAR-2 THROUGH YEAR-5 COUNTS OF ESTABLISHED NATIVE TREES BY SPECIES.
3) COUNTS OF DEAD PLANTS WHERE MORTALITY IS SIGNIFICANT IN ANY MONITORING YEAR.
4) ESTIMATE OF NATIVE COVER IN TREE AND SHRUB PLANTED AREAS.
5) ESTIMATE OF NATIVE COVER IN PERENNIAL AND GROUNDCOVER PLANTED AREAS.
6) ESTIMATE OF NON-NATIVE, INVASIVE WEED COVER SITE WIDE.
7) TABULATION OF ESTABLISHED NATIVE SPECIES, INCLUDING BOTH PLANTED AND VOLUNTEER SPECIES.
8) PHOTOGRAPHIC DOCUMENTATION FROM AT LEAST THREE FIXED REFERENCE POINTS.
9) ANY INTRUSIONS INTO OR CLEARING OF THE PLANTING AREAS, VANDALISM, OR OTHER ACTIONS THAT IMPAIR THE INTENDED FUNCTIONS OF THE MITIGATION AREA.
10) RECOMMENDATIONS FOR MAINTENANCE OR REPAIR OF ANY PORTION OF THE MITIGATION AREA.

MAINTENANCE

THE SITE WILL BE MAINTAINED IN ACCORDANCE WITH THE FOLLOWING INSTRUCTIONS FOR FIVE YEARS FOLLOWING COMPLETION OF THE CONSTRUCTION.

1) FOLLOW THE RECOMMENDATIONS NOTED IN THE PREVIOUS MONITORING SITE VISIT.
2) GENERAL WEEDING FOR ALL PLANTED AREAS:
   a. AT LEAST TWICE YEARLY, REMOVE ALL COMPETING WEEDS AND WEED ROOTS FROM BENEATH EACH INSTALLED PLANT AND ANY DESIRABLE VOLUNTEER VEGETATION TO A DISTANCE OF 18 INCHES FROM THE MAIN PLANT STEM. WEEDING SHOULD OCCUR AT LEAST TWICE DURING THE SPRING AND SUMMER. FREQUENT WEEDING WILL RESULT IN LOWER MORTALITY, LOWER PLANT REPLACEMENT COSTS, AND INCREASED LIKELIHOOD THAT THE PLAN MEETS PERFORMANCE STANDARDS BY YEAR 5.
   b. MORE FREQUENT WEEDING MAY BE NECESSARY DEPENDING ON WEED CONDITIONS THAT DEVELOP AFTER PLAN INSTALLATION.
   c. DO NOT WEED THE AREA NEAR THE PLANT BASES WITH STRING TRIMMER (WEED WHACKER/WEED EATER). NATIVE PLANTS ARE EASILY DAMAGED OR KILLED, AND WEEDS EASILY RECOVER AFTER TRIMMING.
   d. SELECTIVE APPLICATIONS OF HERBICIDE MAY BE NEEDED TO CONTROL INVASIVE WEEDS, ESPECIALLY WHEN INTERMIXED WITH NATIVE SPECIES. HERBICIDE APPLICATION, WHEN NECESSARY, SHALL BE CONDUCTED ONLY BY A STATE-LICENSED APPLICATOR.
3) APPLY SLOW RELEASE GRANULAR FERTILIZER TO EACH INSTALLED PLANT ANNUALLY IN THE SPRING (BY JUNE 1) OF YEARS 2 THROUGH 5.
4) REPLACE MULCH AS NECESSARY TO MAINTAIN A 4-INCH-THICK LAYER, RETAIN SOIL MOISTURE, AND LIMIT WEEDS.
5) REPLACE EACH PLANT FOUND DEAD IN THE SUMMER MONITORING VISITS DURING THE UPCOMING FALL DORMANT SEASON (OCTOBER 15 TO MARCH 1).
6) THE HOMEOWNER WILL ENSURE THAT WATER IS PROVIDED FOR THE ENTIRE PLANTED AREA WITH A MINIMUM OF 1 INCH OF WATER PROVIDED PER WEEK FROM JUNE 1 THROUGH SEPTEMBER 30 FOR THE FIRST TWO YEARS FOLLOWING INSTALLATION THROUGH THE OPERATION OF A TEMPORARY IRRIGATION SYSTEM. LESS WATER IS NEEDED DURING MARCH, APRIL, MAY AND OCTOBER.

CONSTRUCTION NOTES AND SPECIFICATIONS

NOTE: SPECIFICATIONS FOR ITEMS IN BOLD CAN BE FOUND BELOW UNDER "MATERIAL SPECIFICATIONS AND DEFINITIONS."

NOTE: THE WATERSHED COMPANY [(425) 822-5242] PERSONNEL, OR OTHER PERSONS QUALIFIED TO EVALUATE ENVIRONMENTAL RESTORATION PROJECTS, WILL MONITOR:

1. ALL SITE PREPARATION
   a. SOIL PREPARATION.
   b. MULCH PLACEMENT.
2. PLANT MATERIAL INSPECTION
   a. PLANT MATERIAL DELIVERY INSPECTION.
   b. 100% PLANT INSTALLATION INSPECTION.

GENERAL WORK SEQUENCE

1. ALL PLANT INSTALLATION IS TO TAKE PLACE DURING THE DORMANT SEASON (OCTOBER 15TH - MARCH 1ST), FOR BEST SURVIVAL.
2. PREPARE A PLANTING PIT FOR EACH PLANT AND INSTALL PER THE PLANTING DETAILS.
3. MULCH THE INSTALLED TREES, SHRUBS, AND GROUNDCOVERS WITH WOOD MULCH, FOUR INCHES THICK.
4. INSTALL A TEMPORARY, ABOVE GROUND IRRIGATION SYSTEM TO PROVIDE FULL COVERAGE TO ALL PLANTS WITHIN THE RESTORATION AREA.

MATERIAL SPECIFICATIONS AND DEFINITIONS

1. FERTILIZER: SLOW RELEASE, GRANULAR, PHOSPHOROUS-FREE FERTILIZER. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR APPLICATION. KEEP FERTILIZER IN A WEATHER-TIGHT CONTAINER WHILE ON SITE. NOTE THAT FERTILIZER IS TO BE APPLIED ONLY IN YEARS 2 THROUGH 5 AND NOT IN THE FIRST YEAR.
2. IRRIGATION SYSTEM: AUTOMATED SYSTEM CAPABLE OF DELIVERING AT LEAST ONE INCH OF WATER PER WEEK FROM JUNE 1 THOUGH SEPTEMBER 30 FOR THE FIRST TWO YEARS FOLLOWING INSTALLATION.
3. RESTORATION PROFESSIONAL: WATERSHED COMPANY [(425) 822-5242] PERSONNEL, OR OTHER PERSONS QUALIFIED TO EVALUATE ENVIRONMENTAL RESTORATION PROJECTS.
4. WOOD CHIP MULCH: "ARBORIST CHIPS" (CHIPPED WOODY MATERIAL) APPROXIMATELY ONE TO THREE INCHES IN MAXIMUM DIMENSION (NOT SAWDUST). THIS MATERIAL IS COMMONLY AVAILABLE IN LARGE QUANTITIES FROM ARBORISTS OR TREE-PRUNING COMPANIES. MULCH SHALL NOT CONTAIN APPRECIABLE QUANTITIES OF GARBAGE, PLASTIC, METAL, SOIL, AND DIMENSIONAL LUMBER OR CONSTRUCTION/DEMOLITION DEBRIS.
5. COMPOST: COMPOST SHALL MEET WSDOT STANDARDS SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, 9-14.4(8) FOR FINE COMPOST.

CONTINGENCIES

IF THERE IS A SIGNIFICANT PROBLEM WITH THE ENHANCEMENT AREAS MEETING PERFORMANCE STANDARDS, A CONTINGENCY PLAN WILL BE DEVELOPED AND IMPLEMENTED. CONTINGENCY PLANS CAN INCLUDE, BUT ARE NOT LIMITED TO: SOIL AMENDMENT; ADDITIONAL PLANT INSTALLATION; AND PLANT SUBSTITUTIONS OF TYPE, SIZE, QUANTITY, AND LOCATION.

Know what's below. Call before you dig.

PERMIT SET - NOT FOR CONSTRUCTION

THE WATERSHED COMPANY
750 Sixth Street South
Kirkland WA 98033
p 425.822.5242
www.watershedco.com
Science & Design

KASSAM RESIDENCE
MITIGATION PLAN
PREPARED FOR: FAIZEL KASSAM
PARCEL #5491700230
840 97TH AVE SE
BELLEVUE, WA 98004

SUBMITTALS & REVISIONS

NO.	DATE	DESCRIPTION	BY
1	09-30-2019	MITIGATION PLAN PERMIT SET	LJM

SHEET SIZE:
ORIGINAL PLAN IS 22" x 34".
SCALE ACCORDINGLY.

PROJECT MANAGER: KJB
DESIGNED: LJM
DRAFTED: LJM
CHECKED: KJB
JOB NUMBER: 190630
SHEET NUMBER: W6 OF 6

FILENAME
PRINTED BY
DATE

PLANTING & MITIGATION NOTES